

INTRODUCTION TO PLANT BIOLOGY BIOLOGY 130 – SPRING 2017

SECTIONS	1 - 4	DISCUSSION	M/W, 8 :00 – 9:15 SCI D101
PROFESSOR	ROBERT BELL MARY BARTKOWIAK	LAB	1: T/R, 8:00-9:50, TNR 153 2: T/R, 10:00-11:50, TNR 153 3: M/W, 11:00-12:50, TNR 153 4: M/W, 1:00-2:50, TNR 153
OFFICE	TNR 476	EMAIL	rbell@uwsp.edu
PHONE	715-346-2074	OFFICE HOURS	M/W, 9:15-10:50 T/R. 12:00-1:00
TEXTBOOK	<u>PLANT BIOLOGY</u> by Graham, Graham, and Wilcox, 2 nd edition (REQUIRED, BOOKSTORE RENTAL)		
LAB MANUAL	<u>ESSENTIALS OF BOTANY</u> (REQUIRED, \$22.23 - PURCHASE FROM BOOKSTORE, DO NOT BUY A USED COPY).		
COURSE DESCRIPTION	<u>General biological principles</u> ; emphasis on growth, reproduction, structure, and functions of plants, fungi, protists, and prokaryotes; morphological studies of typical plants.		
COURSE POINTS	The course grade is based on 900 possible points. The classroom component has 450 points (4 – 100 point unit exams, 50 points from other assignments); the laboratory component has 450 points (7 – 50 point quizzes, 1 – 50 point lab report, 1 – 50 point common plant ID exam). Several bonus point opportunities will be available.		
SCALE	Your grade is based on 900 possible points, the grading scale is: 900-837 (93%) A 746-720 (80%) B- 584-558 (62%) D+ 836-810 (90%) A- 719-675 (75%) C+ 557-495 (55%) D 809-783 (87%) B+ 674-630 (70%) C < 495 (<55%) F 782-747 (83%) B 629-585 (65%) C-		
UNIT EXAMS	Unit examinations may consist of multiple choice, fill in the blank, labeling diagrams or short answer discussion questions. All unit exams are scheduled outside of the regular class periods (see below). There are no make-up exams without good reason (one that is satisfactory to the instructor) AND contacting the instructor BEFORE the exam. There will be individual writing assignments, problems, chapter or outside readings, internet research, or unannounced quizzes totaling 50 points.		

**UNIT EXAM
PREPARATION**

Prior to each unit exam a review sheet will be distributed. There will also be optional review sessions (see lecture schedule).

**UNIT EXAM
DATES**

Exam #1: Thursday, 16 February, 6:00 – 8:00pm, SCI D102
Exam #2: Thursday, 16 March, 6:00 – 8:00pm, SCI D102
Exam #3: Thursday, 13 April, 6:00 – 8:00pm, SCI D102
Exam #4: Thursday, 18 May, 10:15 – 12:15am, SCI D101

**LABORATORY
QUIZZES AND
EXAMS**

There are 9 laboratory quizzes (see schedule). Each lab quiz, except two, covers the previous three labs. The quizzes consist of images of lab material and questions related to the lab exercises. Each quiz is worth 50 points. Quiz 1 and Quiz 8 cover two labs plus additional work items. Of these 9 - 50 point quizzes I will count your 7 highest scores. This means you can miss/drop 2 of these 9 exercises. There are no quiz make-ups.

There is an end-of-semester lab experiment report, worth 50 points. This experiment covers many weeks and will be discussed often, report guidelines will be distributed.

A common plant identification exam will be given twice during the semester (see schedule below). It consists of images of fifty plants selected from the list provided and each exam is different. The common plant exam is worth 50 points. You may take the exam twice and I will count your high score.

**ADVICE FROM
DR. BELL**

Tip #1: The best strategy you can use to do well in this course is to be in your seat every period. My exams are drawn entirely from class materials. Getting the material from my perspective is more effective than copying someone's notes or reading the book. I will add material not in the book and will not cover all that's in the book.

Tip #2: Take advantage of my office time. You can't wear out your welcome. Please come in as soon as you have any questions with material, don't wait until after the first exam.

Tip #3: Please turn off your phone every time you enter my class and please do all you can to resist the urge to visit it during class. Pulling it out in front of me is like dangling a steak in front of a hungry lion, no good can come from it.

DISHONESTY

Academic dishonesty will not be tolerated and students involved will be identified to the administration for possible punitive actions. The following link takes you to the UWSP Community Rights and Responsibilities document that delineates your rights and responsibilities as part of this academic community (<http://www.uwsp.edu/admin/stuaffairs/rights/rightsChap14.pdf>).

TENTATIVE LECTURE CALENDAR

<u>DATE</u>	<u>TOPICS</u>	<u>CHAPTERS</u>
01/23	Intro/Review (Syllabus, definition, levels)	1, 2
01/25	Intro/Review (DNA)	6, 7
01/30	Plant Organization (life cycles, meristems)	13, 17, 8
02/01	Plant Organization (secondary stems)	9
02/06	Plant Organization (roots)	10
02/08	Plant Organization (roots)	10
02/13	Plant Organization (leaves)	11
<u>UNIT #1</u>		
	REVIEW: WEDNESDAY, 15 FEBRUARY, 6:00 – 8:00pm, SCI D102	
	EXAM: THURSDAY, 16 FEBRUARY, 6:00 – 8:00pm, SCI D102	
02/15	Plant Metabolism (water potential, water movement)	9
02/20	Plant Metabolism (food movement, general metabolism)	9, 5
02/22	Plant Metabolism (respiration)	5
02/27	Plant Metabolism (respiration)	5
03/01	Plant Metabolism (photosynthesis)	5
03/06	Plant Metabolism (photosynthesis)	5
03/08	Plant Metabolism (photosynthesis)	5
03/13	Plant Metabolism (photosynthesis)	5
<u>UNIT #2</u>		
	REVIEW: WEDNESDAY, 15 MARCH, 6:00 – 8:00pm, SCI D102	
	EXAM: THURSDAY, 16 MARCH, 6:00 – 8:00pm, SCI D102	
03/15	Diversity (genetics, viruses)	Essay 17.1, 14, 15
03/20	SPRING BREAK	
03/22	SPRING BREAK	
03/27	Diversity (prokaryotes)	18
03/29	Diversity (prokaryotes)	18
04/03	Diversity (fungi)	20
04/05	Diversity (fungi)	20
04/10	Diversity (protists)	19
04/12	Diversity (protists)	19
<u>UNIT #3</u>		
	REVIEW: WEDNESDAY, 12 APRIL, 6:00 – 8:00pm, SCI D102	
	EXAM: THURSDAY, 13 APRIL, 6:00 – 8:00pm, SCI D102	
04/17	Plant Kingdom (introduction, bryophytes)	21
04/19	Plant Kingdom (bryophytes, vascular introduction)	21, 22

04/24	Plant Kingdom (seedless vasculars)	22
04/26	Plant Kingdom (seedless vasculars, seed plant introduction)	22, 23
05/01	Plant Kingdom (gymnosperms, flowers)	23, 24
05/03	Plant Kingdom (flowers, double fertilization)	24
05/08	Plant Kingdom (seeds, fruits, germination)	24
05/10	Review 4	

UNIT #4 **REVIEW: TBA**
EXAM: THURSDAY, 18 MAY, 10:15 - 12:15AM, SCI D101

TENTATIVE LABORATORY CALENDAR

<u>DATE</u>	<u>LAB#</u>	<u>TOPIC</u>
01/23, 24	--	<u>Lecture in Lab - atoms, bonds, molecules</u>
01/25, 26	--	<u>Lecture in Lab - cell cycle, mitosis, diversity</u> , Begin Breeding Expt
01/30, 31	1	<u>Lecture in Lab – cell types, primary stems</u> , Introduction to Botany Lab
02/01, 02	2	Microscopes
02/06, 07	3	QUIZ #1 (syllabus, 1, 2), Plant Cells
02/08, 09	4	Mitosis and Reproduction
02/13, 14	5	Meristems, Cell Types, Herb. Stems (count trichomes)
02/15, 16	6	Twigs and Woody Stems
02/20, 21	7	QUIZ #2 (3, 4, 5), Modified Stems, Root Anatomy, Modified Roots
02/22, 23	8	Leaf Anatomy, Modified Leaves
02/27, 28	9	QUIZ #3 (6, 7, 8), Water Relations
03/01, 02	10	Enzymes and Digestion, Respiration
03/06, 07	11	Light and Photosynthesis
03/08, 09	12	QUIZ #4 (9, 10, 11), Control of Plant Growth - 1
03/13, 14	13	Gas and Photosynthesis
03/15, 16	12	Control of Plant Growth - 2 (harvest, replant)
03/20-24	--	<u>No classes – Spring Break</u>
03/27, 28	14	Molecular Plant Genetics (count trichomes)
03/29, 30	15	QUIZ #5 (12, 13, 14), Plant Genetics
04/03, 04	16	Bacteria
04/05, 06	17	Fungi
04/10, 11	18	QUIZ #6 , (15, 16, 17), More Fungi
04/12, 13	--	Discussion of lab experiment/guidelines
04/17, 18	19	Cyanobacteria and algal diversity
04/19, 20	20	Green algal diversity, lichens
04/24, 25	21	QUIZ #7 (18, 19, 20), Bryophytes
04/26, 27	22	Fern Allies, Ferns
05/01, 02	23	QUIZ #8 (21, 22, draft lab table and figures), Gymnosperms
05/03, 04	24	Angiosperms and Flowers
05/08, 09	25	COMMON PLANT #1 , Seeds, Seed Germination, Fruits
05/10, 11	--	QUIZ #9 (23, 24, 25), COMMON PLANT #2, ALL PAPERS DUE

THESE SITES CONTAIN VALUABLE INFORMATION FOR QUIZZES AND PLANT ID.

This site contains images from the labs <http://www.uwsp.edu/biology/courses/botlab/>

This site contains common plant images <http://www.uwsp.edu/biology/courses/plantid/>