

# BIOLOGY 130: INTRODUCTION TO PLANT BIOLOGY – FALL 2012

<b>SECTIONS</b>	1 - 2	<b>LECTURE</b>	M/W/F; 10 :00 – 10 :50AM, TNR 122
<b>PROFESSOR</b>	ROBERT BELL	<b>LAB</b>	7: T/R, 9:00 – 10:50AM, TNR 153 8: T/R, 11:00AM – 12:50PM, TNR 153
<b>OFFICE/PHONE</b>	TNR 476; 346-2074	<b>EMAIL</b>	on campus: rbell off campus: <a href="mailto:rbell@uwsp.edu">rbell@uwsp.edu</a>
<b>OFFICE HOURS</b>	M/W/F:11:00 – 11:50AM W: 9:00 – 9:50AM AND BY APPOINTMENT		
<b>TEXTBOOK</b>	<b><u>PLANT BIOLOGY</u></b> by Graham, et al., (REQUIRED, BOOKSTORE RENTAL)		
<b>LAB MANUAL</b>	<b><u>ESSENTIALS OF BOTANY</u></b> (REQUIRED, \$22.00 - PURCHASE FROM BOOKSTORE, DO NOT BUY A USED COPY).		
<b>COURSE DESCRIPTION</b>	<u>General biological principles</u> ; emphasis on growth, reproduction, structure, and functions of plants, fungi, protists, and prokaryotes; morphological studies of typical plants.		
<b>COURSE POINTS</b>	The course grade is based on 800 possible points. The lecture component has 435 points (4 - 100 point examinations, 35 points from other assignments); the laboratory component has 365 points (7 – 45 point quizzes, 50-point common plant ID exam). Several bonus point opportunities will be available.		
<b>SCALE</b>	Your grade is based on a total of 800 possible points and the grading scale is: 800 - 744 (93%) A      663 - 640 (80%) B-      519 - 496 (62%) D+ 743 - 720 (90%) A-      639 - 600 (75%) C+      495 - 440 (55%) D 719 - 696 (87%) B+      599 - 560 (70%) C              < 440 (<55%) F 695 - 664 (83%) B      559 - 520 (65%) C-		
<b>LECTURE POINTS</b>	Lecture examinations may consist of multiple choice, fill in the blank, labeling diagrams or short answer discussion questions. All lecture exams are scheduled outside of the regular class periods (see below). <b>There are no make-up exams without good reason (one that is satisfactory to the instructor) AND contacting the instructor BEFORE the exam.</b> There may be individual writing assignments involving problems, readings or internet research. Unannounced quizzes may occur. These assignments will total 35 points.		
<b>LECTURE EXAMINATION PREPARATION</b>	Prior to each lecture exam a review sheet summarizing the unit material will be distributed. Additionally, there will be optional review sessions (see schedule below). Lastly, I will be available additional hours for individual assistance.		
<b>LECTURE EXAMINATION DATES</b>	<b>Exam #1: Thursday, 16 February, 6:00 – 8:00PM, SCI D102</b> <b>Exam #2: Thursday, 15 March, 6:00 – 8:00PM, SCI D102</b> <b>Exam #3: Thursday, 12 April, 6:00 – 8:00PM, SCI D102</b> <b>Exam #4: Thursday, 17 May, 10:15AM – 12:15PM, TNR 122</b>		

## LABORATORY POINTS

There are 9 laboratory quizzes (see schedule below). Each lab quiz, except one, covers the previous three labs. The quizzes consist of projected images of material from the labs and questions related to the lab exercises. No lecture-specific material will appear on a lab quiz. Each quiz is worth 45 points. Quiz 9 will be composed of a 15 point one-lab quiz plus a 30 point lab report on the plant breeding experiment. I will count your 7 highest quizzes and there will be no make-ups. This means you can miss/drop 2 quizzes.

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 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 class period. My exams are drawn entirely from lecture materials or specifically assigned readings. Getting the material from my perspective is more effective than copying someone else's notes or just reading the book. I will add material that's not in the book and I will certainly not cover everything in the book.

**Tip #2:** Take advantage of my office hours. You cannot wear out your welcome. Please come in as soon as you have any difficulties with the material, do not wait until after the first exam, by then it may be too late.

## 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 (definition), Syllabus	1, 2
01/25	Intro/Review (bonds, molecules, DNA)	
01/27	Intro/Review (DNA, cell cycle, mitosis)	6, 7
01/30	Intro/Review (meiosis, diversity)	13, 17
02/01	Intro/Review (diversity, life cycles, meristems)	17, 8
02/03	Plant Organization (cell types, stems)	8, 9
02/06	Plant Organization (stems)	9
02/08	Plant Organization (stems, roots)	9, 10
02/10	Plant Organization (roots, leaves)	10, 11
02/13	Plant Organization (leaves)	

**END OF UNIT #1    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, water relations)	9
02/17	Plant Metabolism (water, water relations)	9

02/20	Plant Metabolism (food movement, general metabolism)	9
02/22	Plant Metabolism (general metabolism)	5
02/24	Plant Metabolism (general metabolism, respiration)	5
02/27	Plant Metabolism (respiration, photosynthesis)	5
02/29	Plant Metabolism (photosynthesis)	5
03/02	Plant Metabolism (photosynthesis)	5
03/05	Plant Metabolism (photosynthesis)	5
03/07	Plant Metabolism (photosynthesis)	5
03/09	Plant Metabolism (photosynthesis)	5

**END OF UNIT #2    REVIEW:    WEDNESDAY, 14 MARCH, 6:00 – 8:00PM, SCI D102**  
**EXAM:                    THURSDAY, 15 MARCH, 6:00 – 8:00PM, SCI D102**

03/12	Diversity (genetics)	14, 15
03/14	Diversity (genetics, viruses)	14, 15, Essay 17.1
03/16	Diversity (viruses, prokaryotes)	18
03/19-23	SPRING BREAK	
03/26	Diversity (prokaryotes, fungi)	18, 20
03/28	Diversity (fungi)	20
03/30	Diversity (fungi)	20
04/02	Diversity (fungi)	20
04/04	Diversity (protists)	19
04/06	Diversity (protists)	19
04/09	Diversity (protists)	19

**END OF UNIT #3    REVIEW:    WEDNESDAY, 11 APRIL, 6:00 – 8:00PM, SCI D102**  
**EXAM:                    THURSDAY, 12 APRIL, 6:00 – 8:00PM, SCI D102**

04/11	Plant Kingdom (introduction, bryophytes)	21
04/13	Plant Kingdom (bryophytes)	21
04/16	Plant Kingdom (vascular introduction, seedless vasculars)	22
04/18	Plant Kingdom (seedless vasculars)	22
04/20	Plant Kingdom (seedless vasculars, seed plant introduction)	23
04/23	Plant Kingdom (gymnosperms)	23
04/25	Plant Kingdom (gymnosperms)	23
04/27	Plant Kingdom (flowers, double fertilization)	24
04/30	Plant Kingdom (double fertilization, seeds)	24
05/02	Plant Kingdom (fruits, germination)	24
05/04	TBA	
05/07	TBA	
05/09	Bonus Point Opportunity #5	
05/11	Review Session #4	

**END OF UNIT #4    REVIEW:    FRIDAY, 11 MAY, IN CLASS, TNR 122**  
**EXAM:                    THURSDAY, 17 MAY, 10:15 – 12:15PM, TNR 122**

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## TENTATIVE LABORATORY CALENDAR

<u>DATE</u>	<u>LAB#</u>	<u>TOPIC</u>
01/24	--	<u>Lecture in Lab- Intro/Review (levels, atoms)</u>
01/26	--	<u>Lecture in Lab- Intro/Review (DNA)</u>
01/31	1	Introduction to the Botany Lab, Begin Plant Breeding Experiment
02/02	2	Microscopes
02/07	3	Plant Cells
02/09	4	<b>QUIZ #1</b> , Mitosis, Meiosis, and Reproduction
02/14	5	Meristems, Cell Types, Herb. Stems, Breeding Expt.
02/16	6	Twigs and Woody Stems
02/21	7	<b>QUIZ #2</b> , Modified Stems, Root Anatomy, Modified Roots
02/23	8	Leaf Anatomy, Modified Leaves
02/28	9	Water Relations
03/01	10	<b>QUIZ #3</b> , Enzymes and Digestion, Respiration
03/06	11	Light and Photosynthesis
03/08	12	Control of Plant Growth, part 1
03/13	13	Gas and Photosynthesis
03/15	12	<b>QUIZ #4</b> , Control of Plant Growth, part 2
03/20		SPRING BREAK
03/22		SPRING BREAK
03/27	14	Plant Genetics, Complete Propagation/Breeding Expt
03/29	15	Molecular Plant Genetics
04/03	16	<b>QUIZ #5</b> , Bacteria
04/05	--	<b>COMMON PLANT EXAM #1</b>
04/10	17	Fungi
04/12	18	More Fungi
04/17	19	<b>QUIZ #6</b> , Cyanobacteria and algal diversity
04/19	20	Green algal diversity, lichens
04/24	21	Bryophytes
04/26	22	<b>QUIZ #7</b> , Fern Allies, Ferns
05/01	23	Gymnosperms
05/03	24	Angiosperms and Flowers
05/08	25	<b>QUIZ #8</b> , Seeds, Seed Germination, Fruits
05/10	--	<b>QUIZ #9, COMMON PLANT EXAM #2, ALL ASSIGNMENTS DUE</b>

NOTE THE FOLLOWING WEBSITES THAT CONTAIN VALUABLE INFORMATION FOR LAB QUIZZES AND COMMON PLANT IDS.....

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/>