INTRODUCTION TO PLANT BIOLOGY
BIOLOGY 130 – SPRING 2019

SECTIONS	Lecture 1, Labs 01-03	**DISCUSSION**	M/W, 8 :00 – 9:15, CBB 101
PROFESSOR	ROBERT BELL	**LAB**	01: T/R, 8:00-9:50, CBB 176 02: T/R, 10:00-11:50, CBB 176 03: M/W, 11:00-12:50, CBB 176
OFFICE	CBB 349	**EMAIL**	rbell@uwsp.edu
PHONE	715-346-2074	**OFFICE HOURS**	M/W, 9:15-10:50 T/R, 12:00-1:00

TEXTBOOK **PLANT BIOLOGY** by Graham, Graham, and Wilcox, 2nd edition (Required, rent from bookstore)

LAB MANUAL **ESSENTIALS OF BOTANY** (Required, purchase new from bookstore).

COURSE DESCRIPTION General biological principles; growth, reproduction, structure, and functions of plants, fungi, protists, and prokaryotes; morphological studies of typical plants.

COURSE POINTS The course grade is based on 800 possible points. The classroom unit has 430 points (4-100 point unit exams, 30 point other small assignments); the laboratory component has 370 points (7-40 point quizzes, 1-40 point lab report, 1-50 point plant ID exam). Several bonus point opportunities will also be available.

SCALE Your grade is based on 800 possible points, the grading scale is:

744-800 (93%) A	640-663 (80%) B-	480-519 (60%) D+
720-743 (90%) A-	600-639 (75%) C+	440-479 (55%) D
696-719 (87%) B+	560-599 (70%) C	< 440 (<55%) F
664-695 (83%) B	520-559 (65%) C-	

CLASSROOM POINTS Unit examinations will consist of multiple choice 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 one or more small writing assignment(s).

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, 14 February, 6:00-8:00PM, CBB 101
Exam #2: Thursday, 14 March, 6:00-8:00PM, CBB 101
Exam #3: Thursday, 18 April, 6:00-8:00PM, CBB 101
Exam #4: Thursday, 16 May, 10:15AM-12:15PM, CBB 101

LABORATORY QUIZZES, REPORT, AND EXAM

There are 9 laboratory quizzes (see below). Each lab quiz typically covers the previous three labs. The quizzes consist of images of lab material and questions related to the lab exercises. Each quiz is worth 40 points. Of these 9-40 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 a 40-point, end-of-semester lab report. This experiment covers many weeks, will be discussed often, and 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 class and please do all you can to resist the urge to visit it during class.

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

DATE	TOPICS	CHAPTERS
01/23	Intro/Review (Syllabus, definition, levels, themes)	1, 2
01/28	Intro/Review (DNA)	6, 7
01/30	Plant Organization (life cycles, meristems)	13, 17, 8
02/04	Plant Organization (secondary stems)	9
02/06	Plant Organization (roots)	10
02/11	Plant Organization (roots)	10
02/13	Plant Organization (leaves)	11

UNIT #1 **REVIEW: WEDNESDAY, 13 FEBRUARY, 6:00-8:00PM, CBB 101**
EXAM: THURSDAY,14 FEBRUARY, 6:00-8:00PM, CBB 101

02/18	Plant Metabolism (water potential, water movement)	9
02/20	Plant Metabolism (food movement, general metabolism)	9, 5
02/25	Plant Metabolism (respiration)	5
02/27	Plant Metabolism (respiration)	5
03/04	Plant Metabolism (photosynthesis)	5
03/06	Plant Metabolism (photosynthesis)	5
03/11	Plant Metabolism (photosynthesis)	5
03/13	Plant Metabolism (photosynthesis)	5

03/18-22 SPRING BREAK

UNIT #2 **REVIEW: WEDNESDAY, 13 MARCH, 6:00-8:00PM, CBB 101**
EXAM: THURSDAY, 14 MARCH, 6:00-8:00PM, CBB 101

03/25	Diversity (genetics)	
03/27	Diversity (prokaryotes)	18
04/01	Diversity (prokaryotes)	18
04/03	Diversity (fungi)	20
04/08	Diversity (fungi)	20
04/10	Diversity (protists)	19
04/15	Diversity (protists)	19

UNIT #3 **REVIEW: WEDNESDAY, 17 APRIL, 6:00-8:00PM, CBB 101**
EXAM: THURSDAY, 18 APRIL, 6:00-8:00PM, CBB 101

04/17	Plant Kingdom (introduction, bryophytes)	21
04/22	Plant Kingdom (bryophytes, vascular introduction)	21, 22
04/24	Plant Kingdom (seedless vasculars)	22
04/29	Plant Kingdom (seedless vasculars, seed plant introduction)	22, 23
05/01	Plant Kingdom (gymnosperms, flowers)	23, 24
05/06	Plant Kingdom (flowers, double fertilization)	24
05/08	Plant Kingdom (seeds, fruits, germination)	24

UNIT #4 **REVIEW: TBA**
EXAM: THURSDAY, 16 MAY, 10:15-12:15, CBB 101

TENTATIVE LABORATORY CALENDAR

DATE	LAB#	TOPIC
01/21, 22	---	**NO LAB MEETING**
01/23, 24	1	*Lecture in Lab*, Introduction to Botany Lab
01/28, 29	2	*Lecture in Lab*, Microscopes
01/30, 31	3	Plant Cells
02/04, 05	4	**QUIZ 1 (1, 2, 3)**, Mitosis and Reproduction
02/06, 07	5	Meristems, Cell Types, Herb. Stems (count trichomes)
02/11, 12	6	Twigs and Woody Stems
02/13, 14	7	**QUIZ 2 (4, 5, 6)**, Modified Stems, Root Anatomy, Modified Roots
02/18, 19	8	Leaf Anatomy, Modified Leaves
02/20, 21	9	Water Relations
02/25, 26	10	**QUIZ 3 (7, 8, 9)**, Enzymes and Digestion, Respiration
02/27, 28	11	Light and Photosynthesis
03/04, 05	12	Control of Plant Growth - 1
03/06, 07	13	Gas and Photosynthesis
03/11, 12	12	**QUIZ 4 (10, 11, 13)**, Control of Plant Growth - 2 (harvest, replant)
03/13, 14	14	Molecular Plant Genetics (count trichomes)
03/18-22	---	**NO LAB MEETING – SPRING BREAK**
03/25, 26	15	Plant Genetics
03/27, 28	16	**QUIZ 5 (12, 14, 15)**, Bacteria
04/01, 02	17	Fungi
04/03, 04	18	More Fungi
04/08, 09	---	**QUIZ 6 (16, 17, 18)**, *Lecture in Lab*, Discuss Lab report data and guidelines
04/10, 11	19	Cyanobacteria and algal diversity
04/15, 16	20	Green algal diversity, lichens
04/17, 18	21	**QUIZ 7 (19, 20, draft report table/figures/legends)**, Bryophytes
04/22, 23	22	Fern Allies, Ferns
04/24, 25	23	**QUIZ 8 (21, 22, something else)**, Gymnosperms
04/29, 30	24	Angiosperms and Flowers
05/01, 02	25	Seeds, Seed Germination, Fruits
05/6, 07	---	**QUIZ 9 (23, 24, 25), COMMON PLANT 1**
05/08, 09	---	**COMMON PLANT 2, ALL ASSIGNMENTS 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/