INTRODUCTION TO PLANT BIOLOGY
BIOLOGY 130 – SPRING 2018

SECTIONS	Lect 1, Labs 1-4	**DISCUSSION**	M/W, 8 :00 – 9:15, SCI D101
PROFESSOR	ROBERT BELL	**LAB**	1: T/R, 8:00 – 9:50, TNR 153 2: T/R, 10:00 – 11:50, TNR 153 3: M/W, 11:00 – 1:00, TNR 153
	STEPHANIE LYON		4: M/W, 3:00 – 5:00, TNR 157
OFFICE	BELL - TNR 476 LYON - TNR 301	**EMAIL**	rbell@uwsp.edu slyon@uwsp.edu
PHONE	BELL - 346-2074 LYON – 346-4248	**OFFICE HOURS FOR BELL ONLY**	M/W 9:15 – 10:30 T/R 12:00 – 1:00 and by appt.

TEXTBOOK **PLANT BIOLOGY** by Graham, Graham, and Wilcox, 2nd edition (REQUIRED, BOOKSTORE RENTAL)

LAB MANUAL **ESSENTIALS OF BOTANY** (REQUIRED, $26.75 - PURCHASE FROM BOOKSTORE, DO NOT BUY A USED COPY).

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

COURSE POINTS The course grade is based on 800 possible points. The classroom component has 420 points (4 – 100 point unit exams, 20 points from other assignments); the laboratory component has 380 points (7 – 40 point quizzes, 1 – 50 point lab report, 1 – 50 point common plant ID exam). Several bonus point opportunities may be available.

SCALE Your grade is based on 800 possible points, 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	< 439 (<55%) F
795-664 (83%) B	559-520 (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). **Alternative exam times will be allowed for those that have a legitimate exam conflict (work, child care, health issues - for example) and contacting Dr. Bell before the exam**.

UNIT EXAM PREPARATION

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

UNIT EXAM DATES

Exam #1: Thursday, 02/15, 6:00 – 8:00pm, SCI D101

Exam #2: Thursday, 03/15, 6:00 – 8:00pm, SCI D101

Exam #3: Thursday, 04/19, 6:00 – 8:00pm, SCI D101

Exam #4: Tuesday, 05/15, 2:45 – 4:45pm, SCI D101

OTHER ASSIGNMENTS

There will be other writing assignments, problems, chapter or outside readings, internet research, or unannounced quizzes totaling 20 points.

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 lab material images and questions related to the lab exercises. Each quiz is worth 40 points. Quiz 6 and Quiz 7 cover two labs plus additional, assigned work items. I will count your 7 highest scores. This means you can miss/drop 2 of these 9 exercises. There are no lab quiz make-ups.

There is a lab experiment report, worth 50 points. The lab experiment covers many weeks and will be discussed often. Report guidelines are distributed and the report is due by the end of semester.

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.

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
01/22	Intro/Review (Syllabus, definition, levels, themes)	1, 2
01/24	Intro/Review (DNA)	6, 7
01/29	Intro/Review (meiosis, life cycles, diversity)	13, 17, 8
01/31	Plant Organization (meristems, cell types, tissues)	8
02/05	Plant Organization (stems)	10
02/07	Plant Organization (stems, roots)	10
02/12	Plant Organization (roots, leaves)	10, 11
UNIT #1	**REVIEW: WEDNESDAY, 02/14, 6:00 – 8:00pm, SCI D101** **EXAM: THURSDAY, 02/15, 6:00 – 8:00pm, SCI D101**	
02/14	Plant Metabolism (water potential, water movement)	9
02/19	Plant Metabolism (food movement, general metabolism)	5
02/21	Plant Metabolism (general metabolism)	5
02/26	Plant Metabolism (respiration)	5
02/28	Plant Metabolism (photosynthesis)	5
03/05	Plant Metabolism (photosynthesis)	5
03/07	Plant Metabolism (photosynthesis)	5
03/12	Plant Metabolism (photosynthesis)	5
UNIT #2	**REVIEW: WEDNESDAY, 03/14, 6:00 – 8:00pm, SCI D101** **EXAM: THURSDAY, 03/15, 6:00 – 8:00pm, SCI D101**	
03/14	Diversity (genetics)	14, 15
03/19	Diversity (genetics, prokaryotes)	14, 15, 18
03/21	Diversity (prokaryotes, fungi)	18, 20
03/26	SPRING BREAK	
03/28	SPRING BREAK	
04/02	Diversity (fungi)	20
04/04	Diversity (fungi, protists)	20, 19

04/09	Diversity (protists)	19
04/11	Diversity (protists)	19

UNIT #3 **REVIEW: WEDNESDAY, 04/18, 6:00 – 8:00pm, SCI D101**
EXAM: THURSDAY, 04/19, 6:00 – 8:00pm, SCI D101

04/16	Plant Kingdom (introduction, bryophytes)	21
04/18	Plant Kingdom (bryophytes, vascular introduction)	21, 22
04/23	Plant Kingdom (seedless vasculars)	22
04/25	Plant Kingdom (seedless vasculars, seed plant introduction)	22, 23
04/30	Plant Kingdom (gymnosperms, flowers)	23, 24
05/02	Plant Kingdom (flowers, double fertilization)	24
05/07	Plant Kingdom (seeds, fruits, germination)	24
05/09	TBA	

UNIT #4 **REVIEW: TBA**
EXAM: TUESDAY, 05/15, 2:45 – 4:45pm, SCI D101

TENTATIVE LABORATORY CALENDAR

DATE	LAB	TOPIC
01/22 (inc. lab 4), 23	--	*Lecture in Lab – atoms, bonds, molecules*
01/24**(lab 4)	--	no class meeting
01/24, 25, 29	1	Introduction to the Botany Lab and Microscopes I Begin Plant Expt. (count trichomes, select populations)
01/29, 30, 31	2	Microscopes II Continue Plant Breeding Experiment (pollinate?)
01/31, 02/01, 05	3	Plant Cells
02/05, 06, 07		**QUIZ #1** (1, 2, 3)
	4	Mitosis and Asexual Reproduction
02/07, 08, 12	5	Meristems, Cell Types, Herbaceous Stems
02/12, 13, 14	6	Twigs and Woody Stems
02/14, 15, 19		**QUIZ #2** (4, 5, 6)
	7	Modified Stems, Root Anatomy, Modified Roots
02/19, 20, 21	8	Leaf Anatomy, Modified Leaves
02/21, 22, 26	9	Water Relations
02/26, 27, 28		**QUIZ #3** (7, 8, 9)
	10	Enzymes and Digestion, Respiration
02/28, 03/01, 05	11	Light and Photosynthesis
03/05, 06, 07	12	Control of Plant Growth – Experimental Setup
03/07, 08, 12	13	Gas and Photosynthesis Continue Plant Breeding Experiment (harvest, plant)
03/12, 13, 14	12	**QUIZ #4** (10, 11, 13) Control of Plant Growth – Results and Analysis
03/14, 15, 19	14	Molecular Plant Genetics

03/19, 20, 21	15	Plant Genetics Finish Plant Breeding Experiment (count trichomes)
03/21, 22, 04/02		**QUIZ #5** (12, 14, 15)
	16	Bacteria
03/26-30	--	SPRING BREAK – NO CLASSES
04/02, 03, 04	17	Fungi
04/04, 05, 09	18	**QUIZ #6,** (16, 17, Chapter reading questions) More Fungi
04/09, 10, 11		**COMMON PLANT EXAM #1**
04/11, 12, 16	19	Cyanobacteria and algal diversity
04/16, 17, 18		**QUIZ #7** (18, 19, draft lab report table and figures)
	20	Green algal diversity, lichens
04/18, 19, 23	21	Bryophytes
04/23, 24, 25	22	Fern Allies, Ferns
04/25, 26, 30		**QUIZ #8** (20, 21, 22)
	23	Gymnosperms
04/30, 05/01, 02	24	Angiosperms and Flowers
05/02, 03, 07	25	Seeds, Seed Germination, Fruits
05/07, 08, 09	--	**QUIZ #9** (23, 24, 25) **COMMON PLANT EXAM #2** **ALL ASSIGNMENTS DUE**
05/09, 10** (labs 1-3)	--	no class meeting

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/