Introduction to Plant Biology (BIOL 130)

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Sections : 3-4
Lecture : M/W, 10.00a - 11.15a, TNR 122
Lab Sec. 3 : M/W, 12.00noon -1.50p, TNR 153
Lab Sec. 4 : M/W, 2.00p – 3.50p, TNR 153
Office Hours: T, R, 1.00p – 2.30p or by an appointment.

COURSE DESCRIPTION :

The course will provide an overview of major biological concepts as illustrated by plants. These concepts include anatomy (structure), morphology (function), physiology (basic biochemical life processes), reproduction (genetics and life cycles), ecology (interactions with other organisms and the environment), and classification (the names and distinguishing features of the major plant groups).

PERFORMANCE OBJECTIVES:

- identify plant cells: structure, function, and reproduction.
- distinguish plant anatomy: roots, stems, leaves, flowers and fruit.
- describe the movement of water and solutes in plants.
- synthesize basic chemistry as it relates to living things: photosynthesis, respiration, the molecular composition of cells.
- examine, basis of inheritance. Mendelian genetics.
- learn major groups of plants, their characteristics, and distinctive features. Learn characteristic features of bacteria, viruses, fungi, and algae.

TEXTBOOK **TEXTBOOK** *Plant Biology* by Thomas Rost, Michael Barbour, C.R. Stocking, Terence Murpy 2nd edition. Required; rental from bookstore

LAB MANUAL *Essentials of Botany* seventh edition
Require purchase from bookstore. Do not buy a used copy.

METHODS OF EVALUTION:

You will receive one grade for this course. Lecture and laboratory scores are added together. Your final grade will be based on the total number of points that you receive out of a possible 800 points.

There will be three Lecture exams (100 points each) and a final exam (150 points). There will unannounced pop quizzes at the **beginning** of classes, consisting of 2 points each. There will be 10-15 pop quizzes in whole semester. This will be considered as an extra credit towards your final grade. There is no makeup for these quizzes. If you are late in class you will miss the quiz.

There will be six lab exams. Top five will be considered. Each exam is worth 50 points. The exams consist of material from the labs. You can review your lab images at http://www4.uwsp.edu/biology/courses/botlab/default.htm.

You will be given a Plant identification exam during the semester. It comprises of images of fifty selected plants and is worth 50 points. To prepare for this review the web page: http://www4.uwsp.edu/biology/courses/plantid/.

Break down of points needed for a Letter Grade:

First Lecture Examination	= 100 points
Second Lecture Examination	= 100 points
Third Lecture Examination	= 100 points
Final Lecture Examination	= 150 points
Online discussion	= 50 points
Five lab exams	= 250 points
Plant Identification exam	= 50 points

Plus there will opportunity to score extra points in lecture pop quizzes (~30 points).

Grading Scale for the course is

740 - 800	92.5 – 100%	A
720 - 739	90 - 92.4%	A-
700 – 719	87.5 – 89.9%	B+
660 – 699	82.5 – 87.4%	B
640 – 659	80 – 82.4%	B-
600 – 639	75 – 79.9%	C+
560 – 599	70 – 74.9%	C
520 – 559	65 – 69.9%	C-
480 – 519	60 – 64.9%	D+
440 – 479	55 – 59.9%	D
< 440	< 55%	F

ATTENDANCE:

I expect you to attend each class meeting. Consistent attendance will improve your final grade more than any other investment of time that you can make. I urge you to arrive punctually, attend each lecture, take detailed notes, and to complete all assigned work.

MAKE-UP EXAMS

Make-up exams will be permitted at Instructor's discretion only for unavoidable emergencies. If you know that you will be unable to attend a scheduled exam, it is your responsibility to inform me in advance. In case of unplanned emergency, you must notify me of your absence within 48 hrs of exam and the reason for that absence. If you fail to follow this rule, I am within my rights to refuse to give you a replacement exam.

ACADEMIC INTEGRITY

Academic dishonesty in any form will result in disciplinary action in accordance with UW System Administrative Code.

Here is the link to the document that explains your rights and responsibilities as a member of the UWSP community.

http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf

Bio 130 Class Schedule

Date	Day	Lecture topic (TNR 122)	Lab topic (TNR 153)
Sept. 3	M	**Labor Day**	**Labor Day**
Sept. 5	W	Syllabus, Introduction to cell Biochemistry (pp. 21-27; 226-228)	1,2 Intro, Scopes (Count Trichomes)
Sept. 10	M	The Cell (pp. 30-44)	No Class
Sept. 12	W	Plant cell structure, Cell cycle (pp. 44-50)	2,3 Plant Cell (Pollination)
Sept. 17	M	Plant cell types, Tissues (pp. 54-62)	4 **Lab Exam 1**, Mitosis (Propagation)
Sept. 19	W	Stems (pp. 85-96)	5 Meristems
Sept. 24	M	Stems cont. (pp. 97-99)	6 Wood
Sept. 26	W	Roots (pp. 65-77); Plant nutrition (pp. 160-163)	7 **Lab Exam 2,** Roots
Oct. 1	M	Leaves (pp. 107-125) **(Review session 5.00-6.00p, TNR 120)**	8 Leaves
Oct. 2	T	**Exam 1 (5.00-6.00p, TNR 122)**	
Oct. 3	W	Water and solute movement in plants (pp. 150-160)	9 Water Relations
Oct. 8	M	Plant metabolism, Respiration (pp. 166-167; 180-187)	10 Enzymes, Respiration
Oct. 10	W	Respiration cont. and Photosynthesis (pp. 167-180)	11 **Lab Exam 3,** Light and PS
Oct. 15	M	Photosynthesis cont. (pp. 167-180)	12 Growth Setup
Oct. 17	W	Growth and Development (pp. 193-213)	13 Gas and PS (Harvest, Replant)
Oct. 22	M	Growth and Development (pp. 193-213) **(Review session 5.00-6.00p, TNR 120)**	12 Growth Analysis
Oct. 23	T	**Exam 2 (5.00-6.00p, TNR 122)**	
Oct. 24	W	Genetics and Heredity (pp. 217-223)	14 Molec Genetics
Oct. 29	M	Genetics and Heredity cont. (pp. 236-245)	15 Genetics (Count Trichomes)
Oct. 31	W	Gene Expression (pp. 226-236)	16 **Lab Exam 4,** Bacteria
Nov. 5	M	Gene Expression (pp. 226-236)	17 Fungi I
Nov. 7	W	Bacteria (pp.294-304), Viruses (310-315), and Fungi (pp. 349-370)	18 Fungi II
Nov. 12	M	Fungi (pp. 349-370) **(Review session 5.00-6.00p, TNR 120)**	19 Cyanos, Algal Diversity
Nov. 13	T	**Exam 3 (5.00-6.00p, TNR 122)**	
Nov. 14	W	Fungi and Algae (pp. 304-310)	20 Green Algae, Lichens
Nov. 19	M	Algae (pp. 320-345)	21 **Lab Exam 5,** Bryophytes
Nov. 21	W	Plant Kingdom, Bryophytes (pp. 374-385)	**Plant Identification exam**
Nov. 26	M	Seedless vascular plants (pp. 389-408)	22 Ferns and Allies
Nov. 28	W	Gymnosperms (pp. 412-427)	23 Gymnosperms
Dec. 3	M	Angiosperms (pp. 431-437)	24 Angiosperms
Dec. 5	W	Flower structure (pp. 128-132; 438-443).	25 Seeds, Fruits
Dec. 10	M	Angiosperms: seeds and fruits (pp. 132-147)	**Lab Exam 6**
Dec. 12	W	Review	No class

Final Exam: Monday, December 17th, 12:30-14:30