INTRODUCTION TO PLANT BIOLOGY (BIOL 130)
FALL 2018

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Office hours: M from 14:00 to 14:50 and R 10:00 to 10:50

Lectures: M/T/R 4:00-4:50 in CBB 101

Laboratories: CBB 170
Section 1: T/R 11:00 to 12:50 (Virginia Freire)
Section 2: T/R 13:00 to 14:50 (John Hardy)
Section 3: M/W 10:00 to 11:50 (Virginia Freire

Textbook: Biology of Plants by P. H. Raven, R. F. Evert and S. E. Eichhorn, 8th Edition (required, rental from bookstore).

Lab Manual: Essentials of Botany (required, purchase from bookstore).

Course goal: To introduce basic principles of structure, growth, reproduction, function, evolution and adaptation of plants and a broad survey of diversity that includes bacteria, fungi, heterotrophic protistans, algae and plants. The course will have an emphasis on sustainability, the relationship between plants and people and current environmental issues.

Outcomes: At the end of this semester, you should be able to:

1. Explain the biological principles that govern the cellular basis of life, including energy flow, inheritance, reproduction and evolution.
2. Explain the relationship between form and function in plant cells, tissues and organs.
3. Differentiate among the major groups of plants, fungi, protists and bacteria with an understanding of their evolutionary and ecological relationships, and relevance to humans.
4. Think analytically and apply the scientific method to answer science-based questions of interest.

Attendance: To succeed in this course you need to attend both lectures and laboratories regularly. **This is not an online or hybrid course. A significant part of your grade will be evaluated from pop quizzes during lecture and from laboratory quizzes and reports.**

Exams/quizzes are based only on material covered in lecture/laboratory. There is no substitute for taking your own notes, listening closely and asking questions. Important announcements will happen during lecture/lab time. Makeup lecture exams are given only in the case of excused absence. Valid reasons are **documented** health or family emergencies, or UWSP sponsored events. Sleeping late is not a valid reason! Please inform me **before** the scheduled exam time, whenever possible**.**

Conduct: **An environment of respect is expected in the classroom**. Comments about class material are encouraged but disruptive behavior will not be tolerated. Be considerate to your classmates and step outside the classroom if you want to have a conversation. Please **turn off or mute your phone**. **No phone conversations or texting are allowed during meeting times. Plagiarism on any assignment will not be tolerated.**

Grading: Grades will be posted on D2L. Check them any time at:
http://www.uwsp.edu/d2l/Pages/default.aspx
The points needed for the highest grade in the class to be a perfect score will be added to everybody's score.

Exams: There will be 3 non-comprehensive lecture exams and a comprehensive final exam. All are multiple choice. **Students with a 93% final grade average at the end of the course (92.4% will not do!) will be exonerated from the final exam and will get an A. Study hard from the beginning!**

Extra credit project: This is an optional assignment. Combine anything learned in this course with a hobby or personal interest to produce a project (experiment, paper, sculpture, painting, photographic album, story, poem, song, etc.). Project guidelines will be posted on D2L. Content, originality, presentation are factors that will influence your grade. You can earn up to 40 bonus points towards your final grade.

Points:

Lecture exams (1-3 = 100 points each)	300 points
Final exam	100 points
Lecture quizzes/activities	100 points
Laboratory (quizzes/assignments/Plant ID tests)	300 points
Total	800 points

Scale: Your grade is based on a total of 800 points. The grading scale for the course is:

800 – 744	(93%)	A
743 – 720	(90%)	A-
719 – 696	(87%)	B+
695 – 664	(83%)	B
663 – 640	(80%)	B-
639 – 600	(75%)	C+
599 – 560	(70%)	C
559 – 520	(65%)	C-
519 – 496	(62%)	D+
495 – 440	(55%)	D
< 440		F

TENTATIVE LECTURE SCHEDULE

DATE	TOPIC	BOOK CHAPTER
09/04	Syllabus, general information	
09/06	Introduction	1
09/10	Introduction to the cell	(2)*, 3
09/11	The plant cell	(2)*, 3
09/13	The plant cell	(2)*, 3
09/17	Cell cycle, mitosis	(2)*, 3
09/18	Primary growth, meristems, plant cells and tissues	3, 23
09/20	Primary tissues of the plant	23
09/24	Primary tissues of the plant	23
09/25	The shoot, stems primary and secondary growth	25, 26
09/27	Secondary growth in stems, wood	26
10/01	Wood	26
10/02	The root, structure and development	24
10/04	The shoot, primary structure and development (leaves)	25
10/08	**Lecture exam I**	
10/09	Movement of water/solutes in plants, soil, plant nutrition	29, 30
10/11	Movement of water/solutes in plants, soil, plant nutrition	29, 30
10/15	The flow of energy, respiration	(5)*, 6
10/16	The flow of energy, respiration	(5)*, 6
10/18	Respiration	(5)*, 6
10/22	Photosynthesis, light and life	7
10/23	Photosynthesis, light and life	7
10/25	Photosynthesis, light and life	7
10/29	Regulating Growth and Development, external factors	27, 28
10/30	DNA, Genetics and heredity	8, 9
11/01	DNA, Genetics and heredity	8, 9

11/05	DNA, Genetics and heredity, gene expression	8, 9, 10
11/06	Systematics, Prokaryotes, Cyanobacteria	12, 13
11/08	Prokaryotes, Cyanobacteria	12, 13
11/12	**Lecture exam II**	
11/13	Fungi: zygote, sac, club and imperfect fungi.	14
11/15	Fungi: zygote, sac, club and imperfect fungi.	14
11/19	Protists: slime molds, egg fungi, etc.	15
11/20	Protists: algae.	15
11/22	Thanksgiving break	
11/26	Algae, Lichens	15
11/27	Introduction to plants	16
11/29	Bryophytes	16
12/03	Seedless vascular plants	17
12/04	Seedless vascular plants	17
12/06	Gymnosperms	18
12/10	Gymnosperms, Introduction to Angiosperms	18, 19
12/11	Angiosperms	19, 20
12/13	**Lecture exam III**	
12/18	**Final exam from 5 to 7 pm.**	

* Chapters for background information.