

## BIOLOGY/WATER 338/538 PHYCOLOGY - FALL 2019

- DISCUSSION:** M: 9:30-10:45AM, CBB 131      **LAB:** F: 9:00-11:50AM, CBB 120  
W: 9:30-10:45AM, CBB 120
- INSTRUCTOR:** DR. ROBERT BELL      **EMAIL:** [rbell@uwsp.edu](mailto:rbell@uwsp.edu)
- OFFICE:** CBB 349      **PHONE:** 346-2074
- OFFICE HOURS:** M/W: 11:00-12:00 and any time the door is open or by appointment.
- TEXTBOOKS:** ALGAE, BY GRAHAM, GRAHAM AND WILCOX, 2<sup>ST</sup> EDITION (REQUIRED RENTAL FROM BOOKSTORE)
- FRESHWATER ALGAE OF NORTH AMERICA: ECOLOGY AND CLASSIFICATION, BY WEHR, ET AL., 2<sup>ND</sup> EDITION (REQUIRED RENTAL FROM BOOKSTORE)
- HOW TO KNOW THE FRESHWATER ALGAE, BY G. PRESCOTT  
(**OPTIONAL**)
- NOTEBOOK:** You will be required (for points) to draw the organisms you work with in lab. A ring-binder notebook with both lined (for notes) and unlined paper (for pictures) works well. #3 pencils work best for drawings, a small set of colored pencils is essential.
- COURSE DESCRIPTION** Taxonomy, morphology and ecology of algae with emphasis on local species using fresh, cultured and herbarium specimens.
- GRADES:** Your course grade is based on 600 possible points as follows:
- |            |                                            |
|------------|--------------------------------------------|
| 300 points | unit exams (3 - 100 points each)           |
| 200 points | lab practicals (2 - 100 points each)       |
| 45 points  | lab unknowns (15 points each, best 3 of 4) |
| 20 points  | lab notebook                               |
| 35 points  | field work/field report                    |
- SCALE:** The grading scale is:
- |                 |    |                 |    |                 |    |
|-----------------|----|-----------------|----|-----------------|----|
| 600 - 558 (93%) | A  | 497 - 480 (80%) | B- | 419 - 390 (65%) | D+ |
| 557 - 540 (90%) | A- | 479 - 462 (77%) | C+ | 389 - 360 (60%) | D  |
| 539 - 522 (87%) | B+ | 461 - 438 (73%) | C  | <360 (<60%)     | F  |
| 521 - 498 (83%) | B  | 437 - 420 (70%) | C- |                 |    |

**LECTURE EXAMINATIONS:** Examinations may consist of short answer, drawing/labeling, definitions and examples, and discussion questions. The Monday night before exams there will be optional review sessions. There will be no make-up exams without good reason (one satisfactory to me) AND contacting me BEFORE the exam.

**EXAMINATION DATES:** \*\*\*\*\*NOTE: Lecture exams take place during test periods outside class.  
#1: Tuesday, 08 October, 6:00-8:00PM, CBB 190  
#2: Tuesday, 12 November, 6:00-8:00PM, CBB 190  
#3: Tuesday, 17 December, 2:45-4:45PM, CBB 190

**LABORATORY PRACTICALS:** Laboratory practicals cover lab material only and will include identifying unknown algal specimens and identifying structural and functional components discussed in lab.

**ADVICE FROM DR. BELL** Tip #1: The best strategy you can use in this course is to attend every class. My exams are drawn entirely from class discussions UNLESS SPECIFIED IN CLASS. Getting the material from me, hearing from me what is most important and why is vastly more effective than copying someone else's notes or simply trying to read the book. I will be adding material that is not in the book and I will certainly not be able to cover everything that is in the book.

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

**DISHONESTY:** Academic dishonesty in any form will not be tolerated. In addition to losing points on a particular exercise the 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/rightsCommBillRights.pdf>

**LEARNING OUTCOMES** Students will be able to-  
NS LO1: Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.  
NS LO2: Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.  
NS LO3: Describe the relevance of aspects of the natural sciences to their lives and society.

## TENTATIVE LECTURE CALENDAR

<u>DATE</u>	<u>TOPICS</u>	<u>CHAPTERS</u>
09/04	Syllabus; Intro to Algae	1, 2, 5
09/09	Review of important character states	1, 2, 5
09/11	Phyla definitions and thumbnails	1, 2, 5
09/16	Algae and Earth History	1, 2, 5
09/18	Cyanobacteria	6
09/23	Cyanobacteria	6
09/25	Cyanobacterial research summaries and discussion	
09/30	Prochlorophytes, Endosymbiotic origin of plastids	6, 7
10/02	Chlorarachniophytes, Glaucophyta	7
-----	<b>END OF UNIT #1 EXAM: TUESDAY, 10/08, 6:00-8:00PM, CBB 131</b>	
10/07	Chlorophyta	16
10/09	Chlorophyta	16-20
10/14	Chlorophyta	16-20
10/16	Chlorophyta	16-20
10/21	Chlorophyta	16-20
10/23	Chlorophyta, Euglenophyta	16-20, 8
10/28	Chlorophyte and euglenophyte research summaries and discussion	
10/30	Rhodophyta	15
11/04	Rhodophyta	15
11/06	Rhodophyte research summaries and discussion	
-----	<b>END OF UNIT #2 EXAM: TUESDAY, 11/12, 6:00-8:00PM, CBB 131</b>	
11/11	Stramenopiles	12-14
11/13	Stramenopiles	12-14
11/18	Stramenopiles	12-14
11/20	Stramenopiles	12-14
11/25	Stramenopiles	12-14
11/27	Stramenopile research summaries and discussion	
12/02	Cryptophyta, Haptophyta	10
12/04	Dinophyta	
12/09	Dinophyta	11
12/11	Dino/Crypto/Haptophyte research summaries and discussion	
-----	<b>END OF UNIT #3 EXAM: THURSDAY, 12/17, 2:45-4:45PM, CBB 131</b>	

## TENTATIVE LABORATORY CALENDAR

<u>DATE</u>	<u>TOPIC</u>
09/06	Scopes and calibration, drawing, field material, handouts
09/13	practice microscopy and keying
<b>09/14</b>	<b><i>SATURDAY FIELD TRIP</i></b>
09/20	Practice microscopy and keying with field material
09/27	Field Material, Nonmotile Unicells and Colonies 1
10/04	Field Material, Nonmotile Unicells and Colonies 2
<b>10/05</b>	<b><i>SATURDAY FIELD TRIP</i></b>
10/11	*** Unknown 1, Field Material, Filaments 1
10/18	*** Unknown 2, Field Material, Filaments 2
<b>10/25</b>	<b><u>LAB PRACTICAL #1</u></b>
<b>10/27</b>	<b><i>SUNDAY FIELD TRIP</i></b>
11/01	*** Unknown 3, Field Material and other new material
11/08	*** Unknown 4, Field Material, Marine Algae 1
11/15	Marine Algae 2
11/16	<b><i>SATURDAY FIELD TRIP</i></b>
11/22	Field Material, Motile Unicells and Colonies 1
11/29	THANKSGIVING BREAK – NO CLASS
12/06	Motile Unicells and Colonies 2
<b>12/13</b>	<b><u>LAB PRACTICAL #2</u></b>