

# BIOLOGY/WATER 338/538 PHYCOLOGY - FALL 2012

LECTURE: M/W: 8:00 – 9:15AM, TNR 300 LAB: F: 9:00 – 11:50AM, TNR 153

INSTRUCTOR: DR. ROBERT BELL EMAIL: [rbell@uwsp.edu](mailto:rbell@uwsp.edu)

OFFICE: TNR 476 PHONE: 346-2074

OFFICE HOURS: T/W: 2:00 - 4:00PM, and 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., 1<sup>ST</sup> EDITION (REQUIRED RENTAL FROM BOOKSTORE)

HOW TO KNOW THE FRESHWATER ALGAE, BY G. PRESCOTT (OPTIONAL)

NOTEBOOK: You will be required 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 700 possible points as follows:

300 points lecture exams (3 - 100 points each)  
200 points lab practicals (2 - 100 points each)  
60 points readings/reviews/discussion papers/participation  
80 points field work/field report  
60 points lab unknowns (15 pts each, best 4 of 5)

SCALE: The grading scale is as follows:

700 - 651 (93%)	A	580 - 560 (80%)	B-	489 - 455 (65%)	D+
650 - 630 (90%)	A-	559 - 539 (77%)	C+	454 - 420 (60%)	D
629 - 609 (87%)	B+	538 - 511 (73%)	C	<420 (<60%)	F
608 - 581 (83%)	B	510 - 490 (70%)	C-		

LECTURE EXAMINATIONS: Examinations will consist of definitions and examples, short answer, and discussion questions. The night before exams 1 and 2 there will be optional review sessions, the last class period will be the review for exam 3. 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 of class.

#1: Wednesday, 10 October, 6:00 – 8:00PM, TNR 300  
#2: Wednesday, 14 November, 6:00 – 8:00PM, TNR 300  
#3: Wednesday, 12 December, 6:00 – 8:00PM, TNR 300

**LABORATORY PRACTICALS:** Laboratory practicals will be given over the lab material and will include identifying unknown algal specimens and identifying structural and functional components of algae discussed in lab. NOTE: The second lab practical is given during the final exam period.

**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>

### TENTATIVE LECTURE CALENDAR

<u>DATE</u>	<u>TOPICS</u>	<u>CHAPTERS</u>
09/03	LABOR DAY – NO CLASSES	
09/05	Syllabus; Intro to Algae and Algal Lineages , Morphology	1, 3
09/10	Reproduction, Life Cycles, Pigments, Earth history	1, 3
09/12	Endosymbiotic origin of plastids	7
09/17	Endosymbiotic origin of plastids, Photosynthesis	7, 1
09/19	Photosynthesis and energy storage	1
09/24	Cyanobacteria	6
09/26	Cyanobacteria, Glaucophyta	6, 7
10/02	Rhodophyta	15
10/03	Rhodophyta	15
10/08	Rhodophyta	15
<b>-----END OF UNIT #1, EXAM IS WEDNESDAY, 10/010, 6:00 - 8:00PM, TNR 300</b>		
10/10	Chlorophyta	16-20
10/15	Chlorophyta	16-20
10/17	Chlorophyta	16-20
10/22	Chlorophyta	16-20
10/24	Chlorophyta	16-20
10/29	Chlorophyta	16-20

110/31	Chlorophyta	16-20
11/05	Euglenophyta, Cryptophyta, Haptophyta	8-10
11/07	Euglenophyta, Cryptophyta, Haptophyta	8-10
11/12	Euglenophyta, Cryptophyta, Haptophyta	8-10

-----END OF UNIT #2, EXAM IS WEDNESDAY, 11/14, 6:00 - 8:00PM, TNR 300

11/14	Stramenopiles	12-14
11/19	Stramenopiles	12-14
11/21	Stramenopiles	12-14
11/26	Stramenopiles	12-14
11/28	Stramenopiles	12-14
12/03	Stramenopiles	12-14
12/05	Dinophyta	11
12/10	Dinophyta	11
12/12	Review for Exam #3	

-----END OF UNIT #3, EXAM IS WEDNESDAY, 12/12, 6:00 – 8:00PM, TNR 300

### TENTATIVE LABORATORY CALENDAR

DATE	TOPIC	SAT. FIELD TRIP
09/07	Lake selection, scopes, calibration, field material	
09/14	Algal survey, practice keying	
09/21	Nonmotile unicells and colonies	
09/28	Nonmotile unicells and colonies	<b>09/29</b>
10/05	Unbranched filaments, field material	
10/12**	Unbranched filaments	<b>10/13</b>
10/19**	Field material, review for practical	
10/26	<b>LAB PRACTICAL #1</b>	<b>10/27</b>
11/02	Branched filaments, field material	
11/09**	Branched filaments, Charales	<b>11/10</b>
11/16**	field material	
11/23	<u>Thanksgiving Break – no classes</u>	
11/30**	Marine macroalgae	
12/07	Motile unicells and colonies	
12/14	Motile unicells and colonies	
<b>12/17</b>	<b>12:30 - 2:30PM, FIELD REPORT DUE, LAB PRACTICAL #2 (final exam period)</b>	

\*\* these labs include an unknown organism to be identified.