

2004

AQUATIC BOTANY – BTNY 555

SYLLABUS

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FIELD PROJECT ASSISTANT: Debbie Lubelski **Office and lab:** 116 Plant and
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Most class materials will be available on the WebCT: <https://webct.ics.purdue.edu>
PLEASE PRINT OFF THE LECTURE NOTES BEFORE LECTURE

TEXTBOOKS: 1) Required: Aquatic Plants of Illinois (Winterringer and Lopinot)
 FREE: WILL BE DISTRIBUTED DURING LAB
 2) Recommended: A Biology of the Algae (Sze)
WILL USE SZE BEGINNING OCTOBER 14

GRADING

You can access your grades as the semester progresses by logging into your webCT account.

The final grade will be determined on a 90%, 80%, 70%, etc. basis: A=585-650; B=520-584; C=455-519, etc. Borderline cases will be judged on subjective criteria (e.g. participation, class attendance, etc.).

Assignments that are turned in late will have 1/5 of their points subtracted for each day late. Weekend days count as late days.

ATTENDANCE

Attendance will not be taken in the lecture. Each laboratory period that is missed will result in an automatic 10 pt. deduction unless the instructor is notified prior to the start of the laboratory with a relevant excuse. Lack of participation and completion of various activities during the laboratory period will also result in a 10 pt. deduction (it will be interpreted as if you are not there). If you must leave a lab period early, please inform the instructor ahead of time.

Attendance during the two field project trips (Sept. 7 and Sept. 14) is absolutely essential.

MAKE-UP

Laboratories can be made up only if the materials are still available at the time the student wishes to make up the session. Field trips taken during the laboratory period cannot be made up. Only one make-up laboratory per student is allowed.

Lecture exam make-ups will be given **only** if the instructor is notified before the exam date. Sorry, but **the two lab practicals cannot be made up.**

<u>IMPORTANT DATES</u>			Points
Th	Sept. 9	Anatomy exercise due	30
Tu	Sept. 21	Plant ID exercise due	30
TBA		Productivity exercise due	10
Tu	Sept. 28	Lab practical on flowering plants	50
Th	Sept. 30	Progress report on field project due	15
Th	Oct. 7	1 ST LECTURE EXAM	100
Tu	Oct. 19	Field project data/info due	25
Tu	Nov. 2	Descriptive portfolio on field project due	50
Tu	Nov. 9	Phytoplankton exercise due	30
Th	Nov. 11	2 ND LECTURE EXAM	100
Tu	Nov. 16	Lab practical on algae	50
Tu	Dec. 7	Oral reports and completed portfolio due	60
TBA		FINAL	<u>100</u>
		Total points	<u>650</u>

There is the potential for extra credit (see separate handout regarding field project).

STUDENTS WITH DISABILITIES

If you have a disability that requires some special accommodation(s), please contact me within the first or second week of the semester to discuss any arrangements that you may need. I am very willing to make accommodations, but I must know of your specific needs as soon as possible.

INTEGRITY

Students will be expected to conduct their assignments with a sense of responsibility and integrity. If you cannot make a scheduled time to meet with the instructor, teaching assistant, or your field project group, please have the courtesy of informing them ahead of time.

Cooperation and interaction with your neighbors and other students during laboratory periods is encouraged. You can learn a lot by communicating with your peers and your instructors. However, graded assignments are to be done on your own. Any evidence of cheating (e.g. copying someone else's work assignment, looking at other students' papers during exams) will be dealt with harshly. The penalty for academic dishonesty is a failing grade for the assignment/exam for the first incident and a failing grade for the course for a second offense.

Please be careful in how you handle plant specimens and other materials. Leave the plant specimens as you found them. In some cases, there may not be enough plant material for everyone to tear apart. So, please be considerate of your classmates and your instructors and refrain from mangling plant specimens! THANK YOU!!

LECTURE SCHEDULE
Tu,Th 9:30 AM (LILY G-432)

Aug. 24	Introduction to aquatic plants: why are they important?
Aug. 26	Aquatic flowering plant structure, habitats, life cycles
Aug. 31	Introduction to wetlands
Sept. 2	Preparation for field project
Sept. 7	Finish discussion on wetlands and preparation for field project
Sept. 9	Photosynthesis, respiration, and plant growth
Sept. 14	Limnological requirements for aquatic plant growth: water, light
Sept. 16	Limnological requirements for aquatic plant growth: gases, nutrients
Sept. 21	Limnological requirements for aquatic plant growth: substrate, temperature
Sept. 23	Life underwater: how do they get enough light?
Sept. 28	Life underwater: why don't they drown?
Sept. 30	Life underwater: what keeps them growing?
Oct. 5	Competitive strategies: how invasive aquatic plants win out
Oct. 7	LECTURE EXAM
Oct. 12	October break
Oct. 14	Introduction to the algae
Oct. 19	Blue-green algae: are they all bad?
Oct. 21	Blue-green algae
Oct. 26	The slimy green stuff (green algae and euglenoids)
Oct. 28	Chrysophytes and global health
Nov. 2	Dinoflagellates: of toxins, corals, and bioluminescence
Nov. 4	El Niño and other global issues that relate to algae
Nov. 9	Seaweeds: environmental roles and human uses
Nov. 11	LECTURE EXAM
Nov. 16	Freshwater plankton ecology
Nov. 18	Aquatic plants: weeds or crops?
Nov. 23	No lecture
Nov. 25	Thanksgiving break
Nov. 30	Concepts in aquatic plant management
Dec. 2	Non-chemical control of aquatic plant and algae growth
Dec. 7	Non-chemical and chemical control of aquatic plant and algae growth
Dec. 9	How to grow aquatic plants as ornamental or wetland plantings

LABORATORY SCHEDULE
Tu (two sections): 10:30-1:20
2:30-5:20

Labs will be held in 1-135 LILY.

Dates

Aug. 24	Wetland plants
Aug. 31	Wetlands field trip
Sept. 7	Field project on Marsh Lake
Sept. 14	Field project on Marsh Lake
Sept. 21	Review for lab practical
Sept. 28	LAB PRACTICAL ON FLOWERING PLANTS
Oct. 5	Introduction to the algae
Oct. 12	October break
Oct. 19	Survey of algae
Oct. 26	Survey of algae
Nov. 2	Survey of algae; identification of algae from preserved samples
Nov. 9	Marine algae; field project lab work; review for lab practical
Nov. 16	LAB PRACTICAL ON ALGAE
Nov. 23	No lab
Nov. 30	Lake restoration and aquatic plant management
Dec. 7	PROJECT REPORTS