

BOTANY 240: PLANTS AND HUMANS

Fall 2014

Mondays and Wednesdays, 2:30-3:45 pm, Birge 145

WELCOME

Welcome to Botany 240! Whether in rainforests or deserts, on farms or in cities, in snowy Wisconsin or on a tropical beach, we as humans intimately depend on plants. I hope that by learning about botanical diversity and the myriad ways our human family has harnessed it, you will come to feel a greater connection to plants and people around the world.

INSTRUCTOR INFORMATION

Lauren Moscoe, moscoe@wisc.edu, 319 Birge Hall

Office hours: Tuesdays 2-4pm in Birge 124, and by appointment

I will also offer online office hours 6-9pm on 21 September, 26 October, and 9 December (the night before each exam). During this time I will respond immediately to questions via email, and I will post relevant answers on Learn@UW.

Communication policy: I will respond to all emails within 24 hours during weekdays. If you do not hear from me within 24 hours, this is likely because the answer to your question is easily accessible using the resources you have.

COURSE DESCRIPTION

The course will be organized with respect to the varied ways in which we use plants. We will begin with an overview of basic plant structure and function, followed by the topics of evolution and domestication. We will then apply these concepts to our exploration of plants used for food; fibers, dyes, and tannins; ornamentals; beverages; medicines, drugs, and poisons; herbs, spices, and perfumes; and wood, cork, and bamboo. We will conclude by considering our future relationships with plants as we adapt to our changing planet.

In general, lectures will be presented on Mondays, and Wednesdays will consist of activities, demonstrations, and guest lectures. We will also celebrate the botanical dimensions of seasonal festivals such as Halloween and Thanksgiving. You are expected to stay up-to-date with textbook and article readings as they are listed on the syllabus, and you will be responsible for this material on quizzes and exams.

OVERARCHING GOALS

Upon successful completion of this class, you will be able to do the following:

1. Analyze the usefulness of specific plant products with respect to plant biochemistry, anatomy, morphology, ecology, and evolutionary history.
2. Interpret plant use practices as products of interactions between culture and environment.
3. Evaluate the ecological and social implications of plant-use decisions at local and global scales.

TRANSFERABLE SKILLS

Through full engagement in this course, you will develop the following skills:

1. Ability to identify plant structures
2. Ability to read and understand phylogenetic trees
3. Ability to use drawing as a learning tool
4. Ability to take notes during lecture
5. Ability to critically assess popular media about plants

CLASSROOM POLICIES

- Please sit in the first few rows. The lecture hall is bigger than we need, and conversation and interaction will be greatly facilitated if we are close together.
- When you are confused, curious, and/or especially excited, please interrupt, ask questions, and share your insights. Be proactive learners, and contribute in your own way to the classroom environment.
- I will not post slides from lectures, but I will do my best to present course content clearly. It is your responsibility to be present and to take notes.
- Laptops, cellphones, and other distracting electronics are not permitted during class. The first time you are found using such a device, you will be asked to put it away. The second time, you will be asked to leave the class for the remainder of the day. If you have questions about special needs with respect to this policy, please see below.

MINDFULNESS IN THE CLASSROOM

I hope that together we can create a peaceful and open classroom community, where everybody feels comfortable engaging and where low levels of stress and anxiety improve our focus and attention. One specific strategy to help us achieve this is through mindfulness practice. At the beginning of each class period, you will be invited to engage in an optional mindfulness exercise. I ask that you seriously consider participating, but if you choose to opt out, please respect others during our practice.

ACADEMIC INTEGRITY

University of Wisconsin-Madison Academic Integrity Statement*:

*Academic Integrity is critical to the mission of the University of Wisconsin-Madison... All members of the University community play a role in fostering an environment in which student learning is achieved in a fair, just and honest way... Students, faculty**, and staff** are expected to uphold the core values of academic integrity which include honesty, trust, fairness, respect and responsibility. These core values, combined with finding one's purpose and passion and applying them in and out of classroom learning, produce students who become extraordinary citizens. This unique path of opportunities, created by each student, is commonly known as the Wisconsin Experience and impacts our campus community and beyond in significant and positive ways. The value of a University of Wisconsin-Madison degree depends on the commitment of our academic community to promote high levels of personal honesty and respect for the intellectual property of others.*

* From <http://students.wisc.edu/doso/acadintegrity.html>

** Added by LJM

This class will be operated under the assumption that we all practice academic integrity. Toward this goal, we each play important roles. You are expected to cite all work and ideas that are not your own and to work independently on graded work unless otherwise communicated. For my part, I will assume that you are acting accordingly and will treat you with the utmost trust and respect.

EVALUATION

Item	Points	Dates
3 Exams	100 x 3 = 300	22-Sep, 27-Oct, 10-Dec
10 Reading quizzes	10 x 10 = 100	Due 10pm on Sundays preceding week listed on calendar
Semester project	100	Due 24-Nov
Attendance and participation	See below	All semester
	TOTAL = 500	

460-500 = A

440-459.9 = AB

410-439.9 = B

390-409.9 = BC

360-389.9 = C

325-359.9 = D

< 325 = F

DESCRIPTION OF GRADED COMPONENTS

Exams: Exams will consist of 50 multiple-choice questions and will take place in Birge 145 during our regularly scheduled class time.

Each exam will cover textbook, article, and class content from the following weeks:

Exam 1 – weeks 1-3

Exam 2* – weeks 4-8

Exam 3* – weeks 9-15.

* Exams 2 and 3 will also include relevant content from weeks 1-3.

Reading quizzes: Reading quizzes are open book and open notes, but you must work on your own. Submit your answers on Learn@UW by 10:00 pm on Sunday evening preceding the week for which the quiz is listed on the calendar (below). For example, Quiz 1 must be submitted by 10:00 pm on Sunday, 7 September.

Semester project: You will each select one plant on which to focus your project. This may be any plant used by people anywhere in the world. You may choose a plant to which you have a personal connection, or you may choose a plant about which you have only read but that has piqued your interest.

There will be a series of dates throughout the semester during which you will share the progress of your research in small groups. These dates and associated discussion topics are listed below:

Date	Discussion topic	Preparation
10-Sep	Brainstorm	Come to class with a list of 5 plants you are considering.
17-Sep	Selected plants, evolutionary and geographic relationships	Select your plant. Identify it by Latin name and family. Determine center of origin/domestication.
8-Oct	Plant uses	Investigate how your plant is used. Investigate plant's use with respect to biochemistry, anatomy, morphology, ecology, and evolutionary history.
22-Oct	Cultural context	Investigate how your plant's uses are products of interactions between culture and environment.
12-Nov	Impacts of consumption	Evaluate the ecological and social implications of plant-use decisions at local and global scales.

The final graded product will be submitted at the beginning of class on Monday, 24 November. Your submission should include the following:

- 1,000 word report on your research from throughout the semester.
 - o This should include your findings related to each discussion topic.
 - o Research should be based on legitimate and trustworthy sources (e.g., academic journal articles, reference books). Examples of sources that cannot be trusted for this project include Wikipedia and commercial advertisements.
 - o All ideas that are not your own or are not common knowledge must be cited. Please use the Council of Science Editors documentation style (see link on Learn@UW).
- One labeled drawing of your plant (the whole plant, not just the part used by people)
 - o Label relevant morphological structures found in chapter one of the textbook and discussed in class.

Attendance and participation: Your attendance and participation will be recorded for each class period. At the end of the semester, if your grade is on the border between two letter grades, consistent attendance and active participation will be taken into consideration.

RESOURCES

- Required textbook: *Plants in Our World: Economic Botany* (4th Edition), Simpson and Ogorzaly (also on reserve at Steenbock)
- All other readings posted on Learn@UW
- Academic journals that may interest you: *Economic Botany*, *Journal of Ethnobiology*, *Agriculture and Human Values*, *Genetic Resources and Crop Evolution*, *Journal of Ethnopharmacology*
- Greater University Tutoring Service (GUTS) – guts.studentorg.wisc.edu/
- McBurny Disability Resource Center – mcburny.wisc.edu
- Mental Health, Counseling, Psychiatry – <http://uhs.wisc.edu/services/counseling/>

EXTRA CREDIT

There are many botanical adventures available to you nearby, but unfortunately we will not have an opportunity as a class to experience them all. To encourage you to pursue these opportunities, you may earn extra points by carrying out either (or both!) of the following assignments. Each assignment is worth 5 points. You may earn credit twice for each assignment, for a maximum of 20 total points.

1. Attend a botanical event during the semester and submit the associated worksheet found on Dropbox on Learn@UW. Examples of botanical events include farmers' markets, lectures on campus, arboretum work parties, brewery or winery visits, farm visits, and so many more. Use your imagination and step out of your comfort zone!
2. Find, identify, and eat a fruit or vegetable that you have never tried before. This must be a fruit or vegetable generally accepted as food. (In other words, do not try eating something that you are not sure is edible.) Submit a photograph of you with the fruit or vegetable, along with the associated worksheet found on Dropbox on Learn@UW.

ABSENCES AND LATE WORK

If you plan to miss class for a legitimate reason this semester (e.g., academic conference, religious observance), please contact me by 12 September so that we can make appropriate arrangements.

There will be no make-ups for unexcused absences, and I will not accept late work. If you miss lecture, please obtain missed information and notes from a classmate.

If you must miss class because of a personal or family emergency, please contact me as soon as possible so that we can make appropriate arrangements.

SPECIAL LEARNING NEEDS

Your success in this class is important to me. Please let me know by 12 September if you need accommodations in the curriculum, instruction, or assessments. I will attempt to maintain confidentiality of the information you share with me.

ALLERGIES

We will be eating, drinking, and handling plants throughout the semester. Please let me know by 12 September if you have any allergies that might affect your participation.

CALENDAR

See following pages. You can also find the calendar, with links to documents and websites on Learn@UW.

Week	Ch.	Date	In class	Out of class
1 Introduction		3-Sep	Introduction to course	
2 Plant structure and function	1	8-Sep	Lecture	Quiz 1 (due 7-Sep @10pm)
		10-Sep	<i>Semester project: Brainstorm</i> Plant drawing at greenhouses	
3 Agriculture and human manipulation of plants	2, 3	15-Sep	Lecture	Quiz 2 (due 14-Sep @10pm)
		17-Sep	<i>Semester project: Selected plants, etc.</i> Origins of domestication game	
4		22-Sep	Exam 1	
		24-Sep	Farming in Wisconsin: Rufus Haucke, Keewaydin Farms	
5 Food: Fruits and nuts	4, 5	29-Sep	Lecture	Quiz 3 (due 28-Sep @10pm)
		1-Oct	Fruits in Wisconsin: Erin Schneider, Hilltop Community Farm	
6 Food: Grains and legumes	6-8	6-Oct	Lecture	Quiz 4 (due 5-Oct @10pm)

		8-Oct	<i>Semester project: Plant uses</i> Quinoa discussion	Quinoa readings
7 Food: Stems, leaves, roots, tubers	9-11	13-Oct	Lecture	Quiz 5 (due 12-Oct @10pm)
		15-Oct	Supermarket botany	
8 Fibers, dyes, and tannins + ornamentals	18, 20	20-Oct	Natural dyes: Isabel Rojas Viada, UW Dept. of Forestry and Wildlife Ecology	Quiz 6 (due 19-Oct @10pm)
		22-Oct	<i>Semester project: Cultural context</i> Lecture	
9		27-Oct	Exam 2	
		29-Oct	Halloween: Rise of the Giants	Halloween readings
10 Beverages	16, 17	3-Nov	Lecture	Quiz 7 (due 2-Nov @10pm)
		5-Nov	Apple cider: Jim Lindemann, Cider House of Wisconsin	
		8-Nov	Optional field trip: Cider House of Wisconsin	

11 Medicines, drugs, and poisons	14, 15	10-Nov	Herbal medicine: David Kiefer, UW Dept. of Family Medicine	Quiz 8 (due 9-Nov @10pm)
		12-Nov	<i>Semester project: Impacts of consumption</i> Lecture	
12 Herbs, spices, and perfumes	13	17-Nov	Lecture	Quiz 9 (due 16-Nov @10pm)
		19-Nov	Shea butter: Ali Paulson, UW Dept. of Botany and RPCV Mali	
13		24-Nov	<i>Semester project due</i> What is a Thanksgiving meal?	Thanksgiving readings
		26-Nov	NO CLASS	
14 Wood, cork, and bamboo	19	1-Dec	Lecture	Quiz 10 (due 30-Nov @10pm)
		3-Dec	Menominee forestry: Art Shegonee, Menominee Nation	
15 Future Trends	21	8-Dec	Future of food discussion	Foley et al. 2011
		10-Dec	Exam 3	