Spring 2-1-2022

BIOO 335.00: Rocky Mountain Flora

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BIOO 335: Rocky Mountain Flora Spring 2022

Course Objectives and Learning Outcomes

Welcome to the fascinating world of plant diversity! This course introduces basic concepts in plant systematics (plus ecology and evolution), with focus on the vascular plants of Montana.

- *Learn general skills of plant identification and classification*
- *Recognize important plant families and genera of the region*
- *Understand the origins and functions of plant diversity in Montana*

Course format

The lecture and lab components of this course are highly integrated and you will receive a single grade for the entire course. The lectures provide a **systematic** overview of families and genera, as well as the conceptual framework and terminology necessary for identifying and understanding land plants. The lab is structured to reinforce the lecture material and to exercise hands-on plant ID skills, including keying to the species level.

Instructor

Dr. Lila Fishman (www.fishmanlab.org)
lila.fishman@umontana.edu; 243-5166
Office hours: M/W 1-2 on Zoom (https://umontana.zoom.us/j/93037764661) or by appt.

Lectures: MW 11:00-11:50

After the 1st week of classes, lectures (and exams) will be in-person in LA11. We will also live-stream them via Zoom (synchronous hybrid format) for those who cannot attend in-person. Powerpoints and recordings of the Zoom will be posted on Moodle.

Lecture Zoom link: https://umontana.zoom.us/j/94051263860

Labs: Thursdays/Fridays in NS202

- **01, Thursday 10:00-11:50 (Madeline Damon, madeline.damon@umontana.edu)**
- **03, Thursday 1:00 - 2:50 (Colette Berg, colette.berg@umontana.edu)**
- **04, Thursday 3:00 - 4:50 (Madeline Damon)**
- **05, Friday 9:00 - 10:50 (Evan Stark-Dykema, evan.stark-dykema@umontana.edu)**
- **06, Friday 12:00 - 1:50 (Evan Stark-Dykema)**

More detail on lab assignments and grading, as well as TA office hours, and Zoom links, etc., will be provided in the labs.

Course materials

Texts and equipment (available in bookstore)
Required: Lesica, P. Manual of Montana Vascular Plants (please bring to *every* lab after first week)

Optional: Illustrated field guide such as Plants of the Rocky Mountains, guides to family-level identification (e.g. Botany in a Day), and online guides such as Montana Plant-Life may be used as resources for field ID. However, they

are not always suitable for species-level identification and taxonomies vary, ***so use the Lesica text and the provided lecture/lab materials as your final authority***.

Moodle Course Supplement
All materials (including PowerPoint presentations and Zoom recordings within a day of class will be posted on the course Moodle page. Please contact me if you have trouble accessing materials for this course via Moodle (but see UMOnline for general Moodle issues!) Each lab will also have a Moodle page as well. ***Note:*** *The online materials are intended as a supplement to in-class note-taking, not as a substitute for attendance. You are expected to attend all lectures and labs.*

iClickers
We will use the iClicker response system during lectures this semester. This technology will provide you (and us!) with feedback about what you know (and don't) and will help promote better understanding of the concepts presented in lecture. We will run clicker polls in most class periods. Starting the second week of classes, you will be graded on your ***participation*** in polls, not on whether you get answers right. Because we are running the course in hybrid format, hardware clickers are not an option – you should purchase and use the iClicker app on your own smart device ($15.99 per 6 months). Links and direction will be provided in class and on Moodle by the end of Week 2.

Assessment

A single course grade will be based on lecture exams and participation, plus the lab.

Points per assignment		***Letter grade guidelines***
Exam 1	100 points	A-, A = 90-100%
Exam 2	100 points	B-, B, B+ = 80-89%
Final Exam	150 points	C-, C, C+ = 70-79%
Participation	20 points	D-, D, D+ = 60-69%
Lab	130 points	F = <60
Total	500 points	

Note: any curving of final letter grades will be in favor of students (i.e., a score 80% = B- or better). However, we do not generally need to curve this course.

Late/missed exams
If you must miss an exam due to a schedule conflict with an *approved* activity (e.g., participation in a UM-team sporting event), please notify me at least a week prior to the exam so that an alternative exam and time can be arranged. If you miss an exam due to an unplanned event (e.g., illness, car accident) you must contact me via email *as soon as possible* (i.e., ideally that day). Make-up exams may be possible, with appropriate justification. Your TA is your contact person for making up missed labs and they will provide their policies regarding lab assignments during the first weeks of lab.

We recognize that students may need accommodations for remote learning. Contact us in advance.

General policies

Students with disabilities
The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish.

Academic Misconduct
Although you may work collaboratively during the labs and study for exams together, any work submitted for grading must be exclusively your own. Cheating on exams or quizzes is, of course, a violation of the Student Conduct Code. Cheating includes permitting another student to copy your work during an exam. Students found to violate the Academic Conduct Code will receive a failing grade for the course, and will also be fully subject to University of Montana sanctions. For more information on UM policies on misconduct, see the Student Conduct Code.

Adds, drops, and changes of grading
University policies for drop, add, etc. are described in the course catalog. For general information on the semester schedule, see UM's dates and deadlines document. We will follow University policies on drops, adds, changes of grading basis, etc. in this course.

After the 15th day of instruction, status changes cannot be made automatically through Cyberbear. I will routinely approve changes in grading status until the week after Exam 1 grades are posted, but later changes to grading status may require explanation of extenuating circumstances. *Given ongoing pandemic, this may apply to everyone – but please do get in contact with me, your TA, and your advisor as early as possible if you are struggling academically and considering a change in status*

Note: For credit to fulfill a major requirement (e.g. WBIO), you must earn a C- or better in traditional grading format. **Please do not request a switch to CR/NC without speaking with your advisor.**

How to succeed in this class

Be present!
You will get the most out of this course by committing to attend all of the lectures and labs. There is a TON of new terminology, and we USE that terminology in identifying plants. Therefore, it is important to keep up with the material weekly rather than trying to assimilate it all at once before each exam.

Look closely at the world around you!
The point of this class is to give you the tools to identify and understand the abundant and diverse plant life around you, so practice looking at plants systematically whenever you can.

Ask questions!
Questions during the lecture and lab are always encouraged. Please talk to me or your TA (in office hours or by appt.) as soon as you need help with any material. Different study strategies are most effective for different topics (and learning types) – we can help figure out what works best for you!

Stay in touch!
Please see the additional resource documents for academic support, mental health options, and other resources, and stay tuned for class or campus-wide updates on policies, course format, etc.

BIOO 335 Topic Schedule - Spring 2022 (* = lab quiz week)

Week	Date	Lecture topics	Lab topics (*pages are in Lesica key*)
1	1/17	MLK Day, no class	
	1/19	1. Course Intro	Lab intro, keying exercise
2	1/24	2. Plant Systematics & Taxonomy	Non-seed plants
	1/26	3. Non-seed plants (mosses, ferns)	*Handouts, p. 52-72*
3	1/31	4. Conifers	Conifers, walk & keying
	2/02	5. Conifers 2	*Handouts, p. 73-81*
4*	2/07	6. Angiosperms – vegetative terms	Flowers - Ranunculaceae
	2/09	7. Ranunculaceae and Floral terms	*handouts, p. 81-102*
5	2/14	8. Caryophyllaceae +	Caryophyllaceae, *Opuntia,* etc.
	2/16	9. Rosaceae	*p. 111-164*
6*	2/21	**Presidents' Day Holiday - no class**	Rosaceae, Saxifragaceae, *Ribes*
	2/23	10. More Rosids	*p. 243-289*
7	2/28	**EXAM 1 (Lectures 1-9)**	Salicaceae, Betulaceae, *Acer*
	3/02	11. Rosidae trees	*p. 181-185, 108-110, 351*
8	3/07	12. Brassicaeae, Onagraceae, Fabaceae	Rosidae herbs

	3/09	13. Pollination	*p. 186-224, 290-340,*
9*	3/14	14. Asteridae shrubs	Asteridae shrubs
	3/16	15. Dispersal	*p. 225-236, 341, 473-476, 243*
		SPRING BREAK	
10	3/28	16. Asteridae II	Solanaceae, Lamiaceae, Boraginaceae
	3/30	17. More Asteridae	*p. 341-395,403-426, 459-462, 237*
11	4/04	18. Asteraceae, Apiaceae, etc.	Asteraceae, Apiaceae, *Phlox* etc.
	4/06	**EXAM 2 (Lectures 10-17)**	*p. 472-580*
12*	4/11	19. Intro to monocots - Liliaceae	Liliaceae, Orchidaceae, *Iris*
	4/13	20. Orchidaceae and *Iris*	*p.717-742*
13	4/18	21. Poaceae (Grasses)	Poaceae, Collection prep
	4/20	22. Domestication	*p. 645-715, handouts*
14	4/25	23. Rushes and sedges	Cyperaceae, Juncaceae
	4/27	24. Invasive plants	*p. 593-644, handouts*
15	5/02	25. Special topic/catch up	**Lab final**
	5/03	26. Review	
	5/13	**FINAL EXAM (**Friday 10:10-12:10)	

Note: this schedule is a guide to course topics and their order, but may change slightly. Exam/quiz dates will not change.