Biology 335: Rocky Mountain Flora 1st 6-week summer session, 2019

This course is an introduction to plant systematics, with an emphasis on vascular plants of Montana.

Course runs: May 14 - June 20
Lectures: Health Sciences 411: TWR, 8:00 - 9:50
Labs: Natural Sciences 202: TWR: 10:00 - 11:50

Instructor: Greg Peters
Email: greg.peters@mso.umt.edu (best way to get in touch)
Phone: 207-6154
Let me know if you want to discuss anything after lab

Texts and equipment:
Required: Lesica. 2012. *Manual of Montana Vascular Plants*
Optional: Plants of Southern Interior British Columbia and the Inland Northwest
Plant dissection tools
Hand lens (magnification)
Lab notebook

Learning Outcomes:
This course explores the diversity of plant life, with emphasis on flowering plants of Montana. Successful completion will enable students to:

1. Identify plants through
   a. basic terminology used in plant identification
   b. proper use of plant identification keys
2. Recognize common plants of the Rocky Mountains, including
   a. large plant families
   b. several common genera
3. Describe topics relevant to plant systematics, including classification systems and reproductive biology
4. Distinguish key characteristics of plant community ecology and biogeography of Rocky Mountain flora

How to succeed in this course:
You can get the most out of this course by committing to regular attendance in lecture and lab. There is a lot of terminology and you must keep up as it is presented or you might become overwhelmed. Please let me know if you need help with the material; questions are encouraged, and I am happy to meet if you have questions. Portions of lecture materials will be made available on Moodle.

Grading will break down as follows:

Exams (2 @ 100pts)	200	
Take-home exams (2 @ 50pts)	100	90-100% = A- to A
Lab quizzes (4 @ 15pts)	60	80-89% = B- to B+
Home-keyed plants (7 @ 10pts)	70	70-79% = C- to C+
Lab final	40	60-69% = D- to D+
Field Trip Participation (3 @ 10pts)	30	<60% = F
Total	**500**	

Policies:
University policies on drops, adds, changes of grade option, or change to audit status will be observed in this course. Please note that after the second week of the semester, such changes are NOT automatically approved; they may be requested by petition, but the petition must be accompanied by documentation of extenuating circumstances. Requests to drop a course or change the grade basis to benefit a student's grade point average will not be approved. A grade of C or higher will be considered a passing grade for the P/NP option.

Students registered with DSS will be accommodated according to their documented need on all exams and projects. Please contact me one week before each exam if you require any service through DSS.

Some details:

- All exams and lab quizzes are cumulative.
- Assignments (including take-home exams) are collected at the beginning of class at 8:00am.
- Most labs will include practice keying; take advantage of these opportunities to develop your skills.
- Lab quizzes will be either recognition (genera, families, terms) or keying one plant.
- Lab quizzes cannot be made up. Quizzes are offered at the beginning of lab; don't be late!
- Late assignments will lose 10% of their value for each class meeting they are late.
- The Lab Final will be much like multiple lab quizzes: some recognition and some keying.
- The "HomeKey" assignments are outlined below:

You will be asked to turn in, at the beginning of class on their due-dates, 7 HomeKey plants over the course of the semester. Please anticipate giving some good time to each of these HomeKey assignments. You will be asked to find and key out one plant for each of these assignments. This is your chance to go explore and learn even more plants! Here are some guidelines:

- Use only angiosperms
- Record your keying "path," or the steps you chose
- Record the species name properly
- Record the plant itself in some useful manner: a good photo, a nice sketch, or a pressed specimen
- Please do not collect from city open spaces like Mount Jumbo (unless you pick leafy spurge…)
- Collect responsibly; do not collect from a small population

Course Schedule

Date:	Lecture Topic:	Lab Topic:	Quiz/work due:
Week One			
May 14	Classification, Vegetative morphology	Lab overview (in 411)	
May 15	Floral morphology	Plant morphology	
May 16	Angiosperm reproduction, Ranuncul-, Ros-	Ran, Ros	Quiz 1: morphology terms
Week Two			
May 21	Field Trip 1	Field Trip 1	Take-Home exam 1
May 22	Api-, Saxifrag-, Fab-, Onagr-	Api - Onagr	HomeKey1
May 23	Aster-, Lami-, Plantagin-, Orobanch-	Ast - Orobanch	HomeKey2; Quiz 2: keying
Week Three			
May 28	*No Class - Memorial Day Holiday*		
May 29	Boragin-, Caryo-, Polygon-, Brassic-, Eric-	Bor - Eric	HomeKey3
May 30	**Exam 1**	Flower walk	
Week Four			
June 4	Field Trip 2	Field Trip 2	
June 5	Other families & genera; Intro plant ecol.	Other fam. & gen.	HomeKey4; Quiz 3: rec
June 6	Graminoids, Orchid-, Lili-, Salic-, Betul-	Orch - Betul	HomeKey5
Week Five			
June 11	Field Trip 3	Field Trip 3	Take-home exam 2
June 12	Gymnosperms, Pteridophytes, Bryophytes	Conifer walk	HomeKey6; Quiz 4: keying
June 13	Plant communities in Montana	Review for lab final	HomeKey7
Week Six			
June 18	Biogeography in Montana, final exam prep	**Lab final**	
June 19	**Exam 2**		
June 20	Course wrap-up		