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BIOO 335.01B: Rocky Mountain Flora

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

Course runs: May 12 - June 18

Lectures: Remote instruction TWR: 8:00 - 9:50

Labs: Remote instruction TWR: 10:00 - 11:50

* We will not use *all* of these formal meetings times, but these are the scheduled classes, so please keep your Tuesday through Thursday mornings as open as you can, especially **Wednesday mornings from 9:00-11:00am.**

Instructor: Greg Peters

Email: greg.peters@mso.umt.edu (best way to get in touch)

Phone: 207-6154

Texts and equipment:

Required: **Lesica, 2012. *Manual of Montana Vascular Plants***

Reliable computer with camera and internet

Camera for flower photos (phones are fine)

Optional: *Plants of Southern Interior British Columbia and the Inland Northwest*

Plant dissection tools

Hand lens (magnification)

Lab notebook

Class structure:

This is a remote class that includes real-time interaction even if we do not physically meet in person. The course is structured as a compromise between remote and online scheduling. Some of the work will be completed asynchronously (on your own time, but with definite weekly deadlines) and some conferencing instruction is offered to ensure interactive learning. Please take advantage of the freedom offered by this format while committing to our Wednesday morning, 9:00am meetings offered through [Zoom](#). The class lecture and lab activities are integrated into this remote version of the class. Much of the content will be explored using both classroom style learning and investigate lab activities.

All class content is offered online through [Moodle](#), accessed using your UM netID. If you are unfamiliar with Moodle, please read the [UMOnline Moodle tutorial](#) soon.

You will receive links to the weekly Zoom meetings through your student email and on Moodle during the appropriate week. If you have never used Zoom, you will be prompted to download the program the first time you accept an invitation to a meeting by following the provided link. Please note that there is a practice Zoom meeting for questions and fixing bugs on Tuesday, May 12 at 9:00am. Check out this [tutorial video](#) for joining a Zoom meeting.

Remote learning is new for many of us. Please do not be intimidated. Your professor, Greg, is here and happy to help. We will meet the learning objectives of a semester-long course in six weeks, so do not get behind. The two most essential pieces of advice for success are:

- 1) Maintain a commitment to weekly participation with a reliable schedule of completing tasks.
- 2) Ask questions any time. Email is the most reliable way to get in touch.

Learning Outcomes:

This course explores 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

Your Moodle page for this class includes:

- All course documents
- Weekly readings
- Discussion forums (used daily Tuesday-Thursday)
- Assignment instructions and links for submission
- Links to Wednesday Zoom meetings
- Copies of weekly lecture slides
- Quizzes and exams
- Course grades

Grading will break down as follows:

Exams (2 @ 100pts)	200	90-100% = A- to A
Quizzes (4 @ 25pts)	100	80-89% = B- to B+
Home-keyed plants (10 @ 15pts)	150	70-79% = C- to C+
Meetings (highest 5 of 6 @ 10pts)	50	60-69% = D- to D+
<u>Discussions (5 @ 20 pts)</u>	<u>100</u>	<60% = F
Total	600	

Some details:

- All exams and lab quizzes are cumulative.
- Assignments, exams, and quizzes are due Thursday night before 11:55pm during the week offered
- Late assignments will lose 10% of their value for each class meeting they are late.

Course Policies:

University policies on drops, adds, and changes of grade options 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 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.

Course Schedule

Every week will follow the same pattern:

- Tuesday: Read the weekly readings and resources
Add to the discussion forum
Get started on weekly assignments (always due Thursday)
- Wednesday: Class group meeting using Zoom from 9:00am – finish (depending on student need)
Add to the discussion forum
- Thursday: Add to the discussion forum
Optional weekly review meeting on Zoom at 2:00pm
Turn in all weekly assignments before 11:55pm
Complete the weekly quiz or exam before 11:55pm
- Friday through Monday: work on the upcoming week as desired

You are asked to add to the discussion forum at least twice a day each Tuesday, Wednesday, and Thursday. Discussion Forums are graded after week 1 (the first week is practice on the discussion forum).

Date: Topics, Assignments & Tasks:

Week One Class Overview. Classification, Pteridophytes, Gymnosperms & Plant identification

- May 12 Practice Zoom meeting at 9:00am; reading on Moodle
May 13 Class meeting on Zoom 9:00-11:00am and after as needed
May 14 Complete quiz 1: class policies, plant classification, keying & conifers

Week Two Angiosperm morphology & Angiosperm families Group I

- May 19 Reading on Moodle
May 20 Class meeting on Zoom 9:00-11:00am
May 21 Complete quiz 2: Angiosperm Morphology and Families Group 1; Submit HomeKey 1 & 2

Week Three Angiosperm Families Group II

- May 26 Reading on Moodle
May 27 Class meeting on Zoom 9:00-11:00am
May 28 Complete **Exam 1**; Submit HomeKey 3 & 4

Week Four Angiosperm Families Group III

- June 2 Reading on Moodle
June 3 Class meeting on Zoom 9:00-11:00am
June 4 Complete quiz 3: Angiosperm recognition and keying; Submit HomeKey 5 & 6

Week Five Angiosperm Families Group IV & Genera from smaller families

- June 9 Reading on Moodle
June 10 Class meeting on Zoom 9:00-11:00am
June 11 Complete quiz 4: Angiosperm recognition and keying; Submit HomeKey 7 & 8

Week Six Plant ecology, biogeography & course conclusion

- June 16 Reading on Moodle
June 17 Class meeting on Zoom 9:00-11:00am
June 18 Complete **Exam 2**; Submit HomeKey 9 & 10

Overview of Class Responsibilities:

All of the instructions listed below are available within their corresponding activities on our Moodle page.

Weekly readings:

You will have one reading assignment each week, presented in the weekly folder as a .pdf. The file will often include accompanying “reading” in our Lesica book or links to optional external readings. Complete these readings by Tuesday each week so that you can begin adding to the discussion forum and be prepared for our Wednesday Zoom meetings.

Discussion forums:

You are asked to share a minimum of 6 posts to the discussion forum each week. For full credit, please share at least two comments per day between Tuesday and Thursday. Discussion Forums are graded after week 1 (the first week is a practice on the discussion forum).

Each discussion forum will have at least one prompting topic to respond to. You can always begin a new topic or ask questions through the discussion forum, and these definitely count as part of your weekly posts. Your participation will be graded based upon sharing meaningful, original posts on time. Don't worry about length, just make sure to add new ideas in your own words and use the forums to help your learning.

To participate, click on the week's discussion forum on Moodle. Select a topic to respond to. Press “reply,” add your comments to the textbox, and press “submit.” Note the link to “use advanced editor and additional options” just below the textbox for your post. Once this is open, you can click the little arrow beneath the word “message” for more editing tools, including the ability to add images and links to webpages.

Quizzes:

Quizzes are offered through Moodle and close by 11:55pm Thursday night during the week offered. You can take the quiz at any time, but it must be completed in one, half-hour sitting. It can not be "paused" and restarted. You may use any resource to assist you, but with a time limit is essential to be prepared. You are strongly encouraged to start quizzes well before the end of the day Thursday. Make sure to give yourself time for the unexpected

When you are ready, open the quiz and follow the prompts. Make sure to press all the "submit" and "finish" buttons at the end. Please contact Greg if you have concerns or questions about taking a Moodle quiz.

Exams:

Exams are offered exactly like quizzes; they are simply longer and more comprehensive. Exams are allotted 2 hours for completion, so be sure to start no later than 10:00pm on the Thursday offered.

All quizzes and exams are cumulative. They will focus on new material, but rely on the whole semester.

Wednesday Zoom meetings:

You are asked to join one class meeting on Zoom each week, Wednesday mornings from 9:00-11:00am. This time is during our scheduled class meetings and was chosen to reduce conflicts with other courses.

Our Zoom meetings will include instructor-led lectures with opportunities for real-time questions. We will begin by checking in for a few minutes, then dive in to the week's content.

Please come prepared. We will honor all of our time by moving along at a reasonable pace assuming everyone has completed the week's reading before the meeting. Your grade will reflect joining the meeting and participating each Wednesday morning. Don't worry about “saying enough,” just be there to get what you need from the experience.

HomeKey assignments:

There are no HomeKey assignments due during week 1.

Starting in week 2, you are asked to turn in TWO plants you have keyed out using your Lesica book by 11:55pm each Thursday night.

If you are struggling with a HomeKey assignment, you can share your process in the discussion forum, log a discussion post, and maybe get some help with the assignment!

Anticipate giving some good time to each of these HomeKey assignments. There are no papers or major textbook readings in this class. These assignments are a big chunk of your investigative weekly tasks. This is your chance to go explore and learn more plants! Here are some guidelines:

- Identify wild species that you do not yet know
- Use only angiosperms (flowering plants)
- Record the species name properly
- Record your keying "path" -- the steps you chose in Lesica (e.g. "page 210: 8B; 9A ...")
- Use any resource to double check, but follow and record the path using your Lesica book
- You can include both of your plants and their keying paths in one document
- Include a photograph that you took for each plant; try to display key features of identification

To submit your HomeKey assignments:

- 1) Save the species names, keying pathways, and photographs for your **two plants** in .doc or .pdf
- 2) Open the appropriate HomeKey assignment link on Moodle
- 3) Upload your assignment by clicking the "add submission" button, then:
 - a) click the left button directly beneath the "file submissions" header, click "choose file," select the file to upload, click "upload this file," and click "save changes."
 - OR
 - b) drag and drop your file into the rectangular space beneath the "file submissions" header and then click "save changes."

*Remember that a late assignment brings a late penalty and must be sent as an email attachment.

Plant identification during the COVID-19 pandemic:

Our local open spaced and public lands present perfect opportunities to find more than enough wild, blooming plants to complete your 10 HomeKey plants. Please follow all posted and reasonable guidelines for safe social distancing during this time of danger from the COVID-19 pandemic.

Read [these recommendations for safe and responsible outdoor recreation](#).

And look over the [CDC guidelines](#) for appropriate precautions.