

Wilderness & Civilization I Field Studies
NRSM 273 Fall 2015
2 Credits, Traditional Grade
Course meets August 27-September 6, 2015 in Bob Marshall and
Every other Monday throughout semester, 1-3:30pm, unless otherwise noted.

Instructors

Rachel James and Natalie Dawson— 243-6916 ; This course will meet every week with one group, and groups will alternate weeks with some exceptions. See end of syllabus for schedule.

Course Description

The Field Studies class is an experiential course designed to develop your capacity to observe, describe, and interpret the natural world. The course takes place outdoors during a ten-day wilderness backpacking expedition, weekly naturalist walks, and a few ecology field trips around Montana. Field journals are used as a forum to describe observations and develop your naturalist skills. The goal of this course is to develop observation skills that will assist you in reading the landscape not only in Montana, but wherever you call home or go from here. Each student on this course will:

- develop a field journal with weekly field notes and species lists,
- record field observations during a ten-day trip in the Bob Marshall Wilderness,
- study grassland and forest ecosystems across Montana,
- identify Montana’s common plant and animal species,
- teach an environmental education lesson, and

Course Requirements

Evaluation

1. Environmental Education Lesson (Fall Trek)	15%
2. Field Journals (due Sept 27 and Nov 22) (55%):	
A) Fall Trek (daily entries including 4 field notes as specified in syllabus)	20%
B) General Field Notes (5 Friday field trips)	10%
C) Weekly Walks (5)	10%
D) Species List (see guidelines in syllabus)	15%
3. Plant Collections	20%
4. Participation	10%

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at [Student Conduct Code](#).

Participation (10%)

Participation is a critical component of field studies. Your participation will be evaluated on your timeliness and preparedness, careful listening, active engagement, and questions/comments during walks and field trips.

Absence: You are allowed one excused Weekly Walk absence during the semester. Your absence must be excused by Natalie before the date. Additional absences result in no points for that field note.

Late arrival: You will receive half a point off for each late arrival.

1. Environmental Education Lesson (15%)

See guidelines on assignment sheet for Fall Trek

2. Field Journals (55% total)

Due dates: Monday September 26, and Monday November 21

Journal Grading and Evaluation

You will not be marked down for things like artistic ability, but we will be looking for improvement and evidence that you are challenging yourself. Here is a list of the specific categories you will be graded on:

- Completeness (followed the full assignment)
- Observation skills (paid attention to the land, species composition, ecological processes, and instructor)
- Organization (entries organized with clear and thorough Orienting Information)
- Thoughtfulness
- Making connections (exploring the relationships among place, ecology, people, history, etc.)
- **Getting your journal in on time.** Late journals will be marked down a ½ grade for each day they are late.

Please Note: We always try to give you some time on the walks and field trips to start your field notes. However, there is not always enough time to finish, and it is expected that you will finish your journal entries as homework.

Field journals are part of the experiential component of the program and are graded on your demonstrated attention to the natural world, completeness, thoughtfulness, effort, organization, and presence. Journal assignments are NOT lecture notes. Journals can include notes from presentations, but assignments are graded on your PERSONAL observations.

Why keep a field journal?

There are many reasons to keep a field journal that range from recording scientific facts for research to finding inspiration for a piece of art or literature. In general, a field journal is an important tool that will help you to better see and understand the natural world. Below are a few more reasons why field journaling is important:

- Sharpens your observational skills
- Helps you build knowledge of the land (i.e. ecological literacy)
- Documents natural history events
- Slows you down so you can appreciate nature's detail, beauty, and complexity
- Helps you rediscover and/or develop all your senses by engaging with nature
- Transforms you into a better naturalist, artist, poet, writer, scientist, and neighbor
- Make connections between places, critters, and your reflections on them
- Develops your eye--you will never see the world in the same way
- Develops your skills as a naturalist that you can build on for the rest of your life
- Helps you be present in the moment

Field Journal Requirements

Please clearly mark each entry in your journal as one of the following (all described in detail below):

- A. Fall Trek Assignment (25%)**
- B. General Field Notes (10%)**
- C. Weekly Walks Naturalist Field Note (10%)**
- D. Species List (this can be submitted electronically) (15%)**

We will often facilitate field notes in some way, shape or form, in order to help focus your entries as we encounter different environments throughout the year. We provide you with a general outline of what to include in a good field note (see below); however, you are strongly encouraged to add other questions, observations, etc. that interest you and help make your journal more meaningful.

ORIENTING INFORMATION GUIDELINES

Date: Write the date and time out in the following format: "10 January 2008, 10:00 am " in the left hand margin. Date should be underlined at top of each entry, starting with the date and continuing straight across page.

Location/ route: Be as concise as possible without sacrificing accuracy. Order the information so that it goes from the most specific to general, or from local to landscape level. If you are in the same place two or more days running the location information can just be "as previous". Ex:

Location: east bank of Rattlesnake Creek, 2 miles north of Clark Fork River Corridor Trail, 'South Zone' of Rattlesnake Recreation Area, 4 miles north of Missoula, Missoula County, western Montana¹.

Distances should be straight-line distances, not route distances.

Weather: Essentials to include are **temperature**, **wind speed** (in Beaufort Scale or km/hr), **cloud cover** (in 10ths of the sky covered), and **precipitation**. See next page for Beaufort wind scale

Here is the Beaufort wind scale:

0	<2	CALM	Smoke rises vertically
1	~4	LIGHT AIR	Smoke drifts, but wind vanes do not.
2	~8	LIGHT BREEZE	Wind felt on face, leaved rustle.
3	~15	GENTLE BREEZE	Leaves and small twigs in constant motion. Light flags extended.
4	~25	MODERATE BREEZE	Wind raises dust and loose paper. Small branches move.
5	~35	FRESH BREEZE	Small trees in leaf begin to sway.
6	~45	STRONG BREEZE	Large branches in motion. Whistling in phone wires. Umbrella use difficult.
7	~55	NEAR GALE	Whole trees in motion. Inconvenience felt when walking against wind.
8	~70	GALE	Breaks twigs off trees. Impedes progress.
9	~80	STRONG GALE	Slight structural damage to roofing shingles, TV antennae.
10	~100	FULL GALE	Trees uprooted, considerable structural damage.
11	>110	STORM	Widespread structural damage

Elevation: Approximate elevation in meters or feet above sea level. (get from topo maps or altimeter)

Environmental/ Additional information: Give a description of the landscape and vegetation type, including dominant or important species. See list of habitat definitions below. When traveling, give a synopsis of the vegetation types passed through during the day. Such as second growth lodgepole pine forest, young clearcut, mixed large-ponderosa pine mature forest. In addition, please include information such as land ownership, watershed, mountain range, basin/valley, habitat, aspect, elevation, roads, towns, and any other creative way you want to demonstrate location.

Ex:

Additional info: East bank of Rattlesnake Creek, riparian habitat, heavy trail use. Rattlesnake Creek is a municipal watershed for the city of Missoula. The Rattlesnake flows into the Clark Fork which flows into the Columbia River and to the Pacific Ocean.

Time: Recording time is important for special events, or for describing how long was spent in a particular location or at a particular activity. If you have two or more entries on the same day and location, write a new entry immediately under the previous one, with an updated time.

What was happening: species seen, behaviors, lecture notes, etc.

¹ If your whole notebook is devoted to your field trips for this semester then you should have the general location (such as western Montana) at the beginning of the book. You then do not need to repeat this in all the field observations unless you are in a different area such as Yellowstone, the Rocky Mountain Front, or Central Montana

A. Fall Trek Journaling Assignment (20%)

During the *Fall Trek* in the Bob Marshall Wilderness there are specific journaling assignments. During this time, you will need to:

1. Complete four **General Field Notes** entry (see below)
2. Document eight plants/trees/shrubs/grasses/etc and four animals (mammals, insects, birds) using the **Species Observations Guidelines** (see below).
3. You will need to include **unique orienting information** for each entry unless you are in the same place.

B. General Field Notes (5 required) (10%)

Several of our Friday field trips will focus specifically on the ecology of regional grassland, alpine, forest and other ecosystems. **You will need 3 General Field Notes** from the ecological-oriented field trips. Document your observations and interpretations from these trips using your own creative style. Be sure to capture what you found to be significant points made by the speakers, in addition to your personal observation. Use creative drawings, diagrams, color, words, and other techniques. In order to encourage you to diversify your field journal and be creative, you are required to include (in addition to orienting information) at least one of the following assignments in each of your field journal entries: **(We encourage you to try all of the above at some point during the semester)**

1. An event map
2. A full page drawing and text spread (a journal entry that takes up both sides of your journal)
3. An original poem or creative writing *inspired by being in the field and relating to that experience*
4. Species Observations--An entry of two species (plant or critter) according to the outline below

SPECIES OBSERVATIONS GUIDELINES

Plants/trees/shrubs/grasses/etc. — observations include:

- scientific name (underlined, capitalize Genus but not species) and common name (squiggle line under, not capitalized unless proper name)
- Describe three distinguishing characteristics
- A field sketch of some distinguishing part (cones/fruit/needles/etc.) or the whole plant and label parts if necessary; include the scale that the plant (or part of plant) is drawn at (i.e. 1/2 life size), and reference any guide book used in helping your field sketch
- Describe habitat plant was found growing in (what are the other plants growing with it, wet or dry site, aspect, canopy cover, soil, etc.)
- Explain why you choose these particular plants
- Include any interesting facts, observations, or questions (e.g. plant is native or invasive, Latin name comes from Lewis and Clark, plant has been browsed on by elk or is a favorite food for grizzly bears, etc.)
- Remember to cite any books used in your observation (ie, *Plants of the Rockies*, etc.)

Animals that you see/hear or find signs of— observations include:

- scientific name (underlined, capitalize Genus but not species) and common name (squiggle line under, not capitalized unless proper name) (or general description if name unknown)
- Describe distinguishing characteristics if you saw the animal, or describe signs that indicated its presence
- Sketch animal or some sign of it that is relevant and meaningful to the encounter. If you actually saw animal try and draw from memory or use field guides to fill in the blanks. If you saw a track or scat, then sketch that.
- Give a habitat description and include what the animal was doing there, or why you think it was found in particular habitat
- Remember to cite any books used in your observation (ie, *Tracks and Scat*, etc.)

C. Weekly Walk Naturalist Field Note (5 required) (10%)

Weekly Walks provide an opportunity for us to explore the natural world right here in Missoula each week. Consistent observation of what composes our home is something many of us may aspire to but rarely take the opportunity to do; now is your chance! During these walks we will document our observations over time as the seasons change, birds come and go, plants start form buds and drop their leaves, snow falls, and animals wander leaving their tracks. This is also a good time to practice field sketching and other field journaling skills. For walks we will break into two groups. Groups will be determined on Monday, Sept. 13, and will meet Tues or Thurs starting the week of Sept 13 through week of Nov. 16. **You are required to complete 8 out of 9 possible *Naturalist Field Notes*.**

For each entry, include:

- Detailed orienting information and
- Detailed notes, sketches and/or observation on the assignment or topic of the walk

D. Semester Species List (10%)

Your *Species List* is a way to document all of the plants and animals that you encounter this semester, whether on our trek, walks, or field trips. By the end of the semester, create an alphabetized species list; with the species first, then where **you** saw it, and the date. Either one list or sub-divided into species types is fine (i.e. trees, shrubs, flower, lichen, critters). Then, if you see it again somewhere else, just add the place and date to the entry. That way you get an idea of the distribution and abundance of the species.

Example: Douglas Fir, *Pseudotsuga menziesii*; Rocky Mtn Front, 9/1-9/8; Lolo Peak, 9/28, etc.

- You can either reserve pages at the back of your journal for you Species List or type it, but it needs to be alphabetical. If you want to 'roughly' alphabetize the list in your journal, that is fine, i.e. have all the 'A's together, all the 'B's together. That way you can set aside pages/ sections of pages in your journal for each letter and add species as you go. Either way is fine, as long as the species are ordered.
- Remember to add in any animals **you** see, or tracks or scat of animals you see!
- Check spelling on plants and animals

3. Plant Collection (20% total)

Due date: Monday December 5, 2014

In this course, you will create a small herbarium collection based on our field studies of plants. Throughout the course, we will do many different field activities, during which you will have time to collect plant specimens. We will go over proper collecting and drying techniques for herbarium specimens. In total, you will prepare 20 individual herbarium sheets throughout the semester, based on our weekly naturalist walks and your own walks throughout the semester. Drying racks will be available in my office but you can also dry the specimens at home. We will go over materials and methods during the first two weeks of class.