

SUPERVISED INTERNSHIP: ETHNOBOTANY & NATIVE PLANT STEWARDSHIP

ENST 396/ENST 595: Fall 2015

PFNAC 102 – T/TH 2:20pm-3:00pm (and as scheduled)

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Internship:

Natural Areas of the University of Montana include over 650 acres of undeveloped land on Mt Sentinel and Fort Missoula. These lands are managed for specific natural area values including biodiversity of plants, preservation of wildlife habitat, availability for research and education areas, and recreational pursuits. Natural Areas of the University of Montana also include landscaped areas on campus such as that surrounding the Payne Family Native American Center.

Student interns will work on campus and on UM's Natural Areas. Students will learn about ecology and conservation of native plants and invasive species, landscaping with native plants, restoring natural areas, stewardship and management of natural areas and ethnobotany of Native peoples. This is a hands-on internship working outdoors with native plants and in UM's Natural Areas, combined with academic work and an individual project. Students will meet weekly with instructors, plus work 6 hours per week on a project on campus.

INTERNSHIP LEARNING OUTCOMES:

By the end of the internship the student will be able to;

- 1) Identifying native and invasive plants of Montana and the region.
- 2) Improve intellectual skills of critically and efficiently reading, summarizing and analyzing scholarly and scientific works.
- 3) Improve communication skills, listening to others, and speaking publicly.

Types of Work:

PFNAC Gardens: Weeding, mulching, pruning. Helping to select appropriate new species to add to the garden (there is theory behind every good garden) and then procuring, transplanting and watering them. Maybe supervise other volunteers participating in these activities. Develop interpretative system for the garden (but maybe not install it).

Mt Sentinel: Remove invasive species (knapweed and hound's tongue), spread native grass seeds. Maybe supervise other volunteers participating in these activities. Probably just 2-4

outings on Mt Sentinel. Possibly on one or two Saturdays if this is desirable for the group; we can invite other students from ENST 101 to join in the work since they all have to do 10 hours of community service.

Expectations:

Students must attend the weekly discussion group.

Your 6 hours per week of work is FLEXIBLE in terms of when it is to be completed, but you cannot defer this work until later in the semester. You need to receive training on most tasks, so we will pick 1-2 afternoons per week that accommodate everyone during the first four weeks, and then people can work independently after that. Hopefully.

Keep in mind that Winter Is Coming. Do not delay. If Marilyn is calling you to find out where you are, you are doing it wrong.

After November 1 there won't be very much to do in the gardens, and the main activity for Mount Sentinel will be SEED SCATTERING, which we will schedule on 1 or 2 times that work for the group (you may not have to attend both times). After the Mt Sentinel seeding job is finished, it will be time to focus on your project.

Equipment

Students will work outside. Students should be prepared for the weather and wear appropriate clothing, wear close-toed shoes, bring gloves and be prepared to get dirty.

Required Readings

Kelly Kindscher, *Edible Wild Plants of the Prairie, An Ethobotanical Guide*, University of Kansas Press, 1987.

Kelly Kindscher, *Medicinal Wild Plants of the Prairie, An Ethobotanical Guide*, University of Kansas Press, 1992.

Judith Larner Lowry, *Gardening with a Wild Heart: Restoring California's Wild Landscapes at Home*, University of California, 2007.

Marilyn Marler, University of Montana Natural Area's Management Plan (Spring 2015, Draft).

And additional readings as assigned.

Optional Readings:

Any Rocky Mountain plant identification book with color photographs. (Such as Linda Kershaw's *Plants of the Rocky Mountains* (Lone Pine Field Guide), Lone Pine, 1998.)

Attendance

Attendance is mandatory.

"Students are expected to attend all class meetings and complete all assignments for courses in

which they are enrolled. Instructors may excuse brief and occasional absences for reasons of illness, injury, family emergency, religious observance or participation in a University sponsored activity.... Instructors shall excuse absences for reasons of military service or mandatory public service." <http://www.umt.edu/catalog/acad/acadpolicy>.

Student Conduct Code

"Being a student at UM presupposes a commitment to the principles and policies embodied in the Code." http://life.umt.edu/vpsa/student_conduct.php.

Disability Student Services

Appropriate accommodations will be made by the University pursuant to the policies of the Disability Student Services, <http://life.umt.edu/dss>.

Weekly Work Schedule

For the first four (4) weeks students will meet at regularly scheduled times for our T/TH class, plus schedule another 6 hours of supervised work. Beginning with week five (5) students will meet once a week with instructors, plus work 6 hours per week on a project on campus. We will be working primarily at the Native Plant Gardens at the Payne Center for Native American Studies, Mount Sentinel and the Jay Labor statue near the Recreation Center (if time allows).

Part One: Native Plant Stewardship

Week 1

Sept. 1/3 Introduction & Tour of Garden areas

Week 2

Sept. 8/10 Readings: Lowry, pp. 1 -73. Assignment #1 due before class.

Week 3

Sept. 15/17 Readings: Lowry, pp. 77-168. Assignment #2 due before class.

Week 4

Sept. 22/24 Readings: Lowry, pp. 171-218, and Marler, UM Natural Area's Management Plan. Assignment #3 & #4 due before class.

Part Two: Montana's Ecoregions & Ethnobotany

Week 5

Sept. 29 Readings: Kindscher, Edible Plants, pp. 1-122. Assignment #5-6: Each week of Part Two, one or two students will present a progress report of their ecoregion.

Week 6

Oct. 6 Readings: Kindscher, Edible Plants, pp. 123-251.

Week 7

Oct. 13 Readings: Kindscher, Medicinal Plants, pp. 1-145.

Week 8

Oct. 20 Readings: Kindscher, Medicinal Plants, pp. 146-289.

Part Three: Public Education/Interpretation

Week 9

Oct. 27 Readings as assigned. Students will explore how to share environmental, ethnobotanic, and scientific information with the general public.

Week 10

Nov. 3 Readings as assigned. Students will explore how to share environmental, ethnobotanic, and scientific information with the general public.

Week 11

Nov. 10 Readings as assigned. Students will explore how to share environmental, ethnobotanic, and scientific information with the general public.

Week 12

Nov. 17 Readings as assigned. Students will explore how to share environmental, ethnobotanic, and scientific information with the general public.
Assignment #7: Draft for Peer and Instructor Review.

Part Four: Public Presentations

Week 13

Nov. 24 Assignment #8: Peer Review Due.

Week 14

Dec. 1 Oral Presentations of Public Education/Interpretation projects. Assignment #9: Submit copy of oral presentation before presentation.

Week 15

Dec. 8 Oral Presentations of Public Education/Interpretation projects.

Week 16

Dec. 15 Final meeting.

Assignments

Attendance & Participation (60 points, 15 weeks @ 4 points per week)

Part One: Precis of readings (10 points, 4 readings @ 2.5 points)

Part Two: Oral report and written outline of Ecoregions & Ethnobotany (10 points, oral report

@ 5 points, outline @ 5 points)

Part Three: Public Education/Interpretation of Ecoregions & Ethnobotany (10 points, Draft @ 5 points, Peer Review @ 5 points)

Part Four: Oral Presentation of Projects (10 points)

Grading:

Final Grade based on a percentage of Total Points (100).

The work you submit for grading must be your own original work, written by you specifically for this course and individual assignments. Any acts of plagiarism or academic dishonesty will result in **automatic failure of the course**, and may result in **further academic punishment**.

Assignments:

Attendance & participation. An Internship is a place for collective learning, and collective learning requires both active listening, thoughtful speaking, group work and active participation. Attendance is required. (60 points, 15 weeks @ 4 points per week).

Part One – Assignments #1-4 – Precis of readings (10 points total). Students will both summarize the assigned readings for the week and reflect on (how does the reading affect your thoughts or ideas) the readings. (800-1,000 words per precis)

Part Two – Assignments #5-6 – Oral report and written outline of Eco-regions & Ethnobotany (10 points total). Students will be assigned specific areas within the Garden at the Payne Family Native American Center (or elsewhere on campus) to work on. Students will give a 15 minute oral report of what they have been doing and what they have learned (from the assigned readings on ethnobotany) about Montana's Native peoples and their relationship with plants. Students will also provide a written outline of their oral presentation.

Part Three – Assignments #7-8 – Public Education/Interpretation of Ecoregions & Ethnobotany (10 points total). Students will work in groups and individually to explore how to share environmental, ethnobotanic, and scientific information with the general public. Students should think creatively about how to best educate the public and interpret information about Native plants and ethnobotany, via written field notes, printed placards, webpage information or even a smartphone application. A draft and peer review will be completed.

Part Four – Assignments #9 – Oral Presentation of Public Education/Interpretation Projects (10 points). Students will present their public education/interpretation projects to their peers, 15 minute oral presentation with visual aids (Powerpoint or Prezi). Oral presentations should incorporate suggestions from peer review.

Environmental Studies requirements for the major:

ENST 396 Supervised Internship: Ethnobotany – with adviser approval – can be substituted for either ENST 398 Internship Variable or ENST 390 Supervised Internship PEAS as an approved community service or internship experience.