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Fall 9-1-2016

### ENSC 551.01A: Environmental Field Study

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Vicki Watson, 101 Botany, 243-5153, <Vicki.watson@umontana.edu>, office hours 10-12 Wed (usually)  
 Class meets Wednesday from 2-5pm in Natural Science 102A. Field trips at other times, including weekends

**Purpose:** To gain experience in the design and interpretation of field studies in applied ecology;  
 To provide low cost ecological studies to the community.

**Prerequisite or Co-requisite:** ENSC 360 (or other approved ecology course); a statistics course

**References:** Cox General Ecology Lab Manual – **read ch 1-5** (will email) & rest as needed for your project/interest.  
 Also useful Brower et al. Field & Lab methods for General Ecology . Both are on library reserve for ENSC 360.

Week	During class	Outside of class time
8-31	Clark Fork River Sampling	River Sampling continues on 9/2-5
9-7	Sampling demos on Rattlesnake Creek Obtain class schedules to plan field trips & lab work	CFC volunteer training 5:30-7:30pm
9-14	Study design lecture	9/16 & 9/17 -- Haz Waste Days; 9/17 -- Clark Fork Superfund trip 8am to 6pm or WEN training noon-3:30pm
9-21	<a href="#">MT Groundwater Academy</a> field day followed by WEN training (4-7:30pm), Greenough Park	9/24 WEN training noon-3:30pm Or service events on river
9-28	Greenough Park Stream discharge measures May demo some data loggers	10/1 or 8 Blackfoot field trip 8am to 6pm
10-5	Training in lab work for chlorophyll/AFDW; QA/QC procedures	
10-12	AWRA field trip	10/12-14 AWRA meeting in Fairmont
10-19	Tour Wastewater Treatment Plant, Ekocompost, land application site (tentative)	
10-26	Perform lab work	
11-2	Data analysis; info on report writing	
11-9	Workshop on Aquatic Invertebrates & Water Quality	
11-16	Report writing	
<b>11-23</b>	<b>Thanksgiving week -- no class</b>	
11-30	More work on report	Report is due by Dec 14
12-7	Presentation on field study (& evaluations)	

**Grade based on percentage of 100 points earned –10 points per week of participation  
 (includes turning in assignments on Rattlesnake creek groundwater monitoring & Clark Fork algae study)**

**Field Trips**

For trips with UM vans (\*), Students may register for a space in a UM van on a sign up list at Rankin Hall room M-2.

- 8-31 (Wed, walk,bike) & 9-2 (Fri, van)--**Clark Fork River sampling in Msl**–meet at 102 Natural Science at 2pm
- 9/3-5 (Sat-Mon), – **sampling on upper & lower river.** arrange to ride with VW on any of these days (as space permits).
- Sept 16-17 – Missoula Hazardous Waste Collection Days (volunteers needed)
- \* Sept 17, Sat – **Clark Fork Superfund tour.** meet at 8am at north end of Van Buren br. (East Gate parking lot). return 6pm.
- \* Oct 1 or 8, Sat, **Blackfoot Restoration Tour** – meet at 8am at north end of Van Buren Br. (East Gate parking lot). return 6pm.
- \*10-19? **Tour Missoula Wastewater Treatment & Ekocompost** (composts Missoula's sewage sludge; started by EVST alum!)  
 .....and land application site with poplar plantation – also started by EVST alums.

Of interest

- Sept 7 (Wed)– Clark Fork Coalition volunteer orientation – 5:30-7:30pm; CFC office, 140 S. 4th W.
- Watershed Education Network’s Stream Team training RSVP [water@montanawatershed.org](mailto:water@montanawatershed.org)
- Sept 17 (Sat, noon-3:30); Sept 21 (Wed, 4-7:30); Sept 24 (Sat, noon-3:30)

Capabilities of the Gordon Lab – chlorophyll and AFDW analysis, soil particle analysis, moisture & organic content (spec, ashing ovens, drying ovens, sieve series, infiltrometer)  
 Have flow meters, DO monitor, temperature loggers, pH pens, aquatic nets, waders, etc