

Bosque Internship (Bosque Ecosystem Monitoring Program - BEMP)



UNM Biology 408L/508L Spring 2010 Course Schedule and Syllabus



The *BEMP Intern Handbook* (supplied by staff) is the required text for this class.

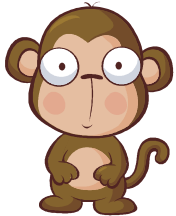
Questions, Comments & Concerns

attendance, participation, final paper – Dr. Kim Eichhorst
field-site assignments, special project hours (ie. field & labwork) – Jen Schuetz
reflective analyses, environmental education, final exam - Kimi Scheerer

- Tuesday, 1/19 **First Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Objectives: program orientation, expectations for the semester, tour of the Biology Annex
Activity: Bosque Education Guides (BEG) Changing River Model
Assignment due next week: write a 2-page reflective analysis for "The Middle Rio Grande (MRG) Bosque – Introduction from the Bosque Education Guide (pages: 1-20)
RA: List three significant alterations man has made to the river and its ecosystem. What are the consequences (to hydrology, community, flora, fauna, etc.) of each of these changes?
- Tuesday, 1/26 **Field Orientation I:** 4:15-6:00 p.m. Rio Grande Nature Center
Meet at the Nature Center Gate (see Directions page). DO NOT PARK IN THE PARKING LOT. Gate is locked at 5 p.m.; park on the street a long block to the east (off Trellis Dr. NW).
Dress appropriately and be prepared for inclement weather!
Objectives: BEMP site orientation, monthly collection parameters, field notebooks
Assignment due today: reflective analysis from the Bosque Education Guide (BEG) intro
DUE Friday, January 29th: e-mail site preference to Jen no later than 5 pm
- jschuetz@sevilleta.unm.edu
Assignment due next week: write a 2-page reflective analysis for "Managed Flooding for Riparian Ecosystem Restoration" & "Bosque Fires and Fire Mortality of Rio Grande Cottonwoods"
RA: What are the general ecosystem responses (both biotic & abiotic) in regard to 1) overbank flooding and 2) fire in the middle Rio Grande valley? Discuss what you believe to be the cause and effects of each.
- Tuesday, 2/2 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Lecture: Introduction to the Middle Rio Grande Ecosystem & proper scientific writing/citation
Activity: leaf litter lab, site assignments & field notebooks from Jen
Assignment due next week: everyone reads "Why do I Use the Bosque with My Second-grade Students?" (p. 89-90), "Flying donuts and hope for eagles" (p. 103-106) & *Last Child in the Woods* (p. 91-96); and you will be assigned one of the following passages from *The Geography of Childhood*:
1. A Child's Sense of Wildness (p. 107-116) if your last name ends with A-M **OR**
2. Going Truant (p. 117-126) if your last name ends with N-Z
RA: How have our cultures' environmental opportunities shifted over the last century? Why is author Richard Louv concerned about 'nature deficit disorder' and what does he and *The Geography of Childhood* authors suggest are the benefits of being outdoors? In response, how do K-12 students learn from being in the field and involved with BEMP?
- Tuesday, 2/9 **Field Orientation II:** 4:15-6:00 p.m. Bosque School (Montaño & Savannah sites)
Meet in the Upper School Science Building at Bosque School (see Directions page).
Dress appropriately and be prepared for inclement weather!
Activity: bosque hike with *Last Child in the Woods* & *Geography of Childhood* discussion
Objectives: BEMP in' it UP study trip, wildlife programs, introduction to environmental education (EE) assignment
Assignment due today: reflective analysis of *Last Child in the Woods* and *Geography of Childhood*
Assignment for next week: coordinate with your site representative for **Monthly Monitoring!**

USGS river-flow website: <http://waterdata.usgs.gov/nm/nwis/uv?08330000>

- Tuesday, 2/16 **Monthly Monitoring Collection** at assigned site – coordinate with site rep.
Objectives: work with volunteers to collect monthly data (NO CLASS SESSION!)
Assignment due next week: environmental education (EE) activity write-up (everyone) and begin 1st round of EE presentations; bring field notebook
- Tuesday, 2/23 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Objectives: site interaction update , graphing site data, interpreting site changes & special project hours discussion
Lecture: Hydrology - ground and surface water interactions
Assignment due today: all EE activity write-ups due and begin EE presentations (10-15 min. each; bonus points for today's presenters); **bring field notebook**
Assignment due next week: write a reflective analysis for "Water in a Changing World"
RA: What surprises you most about the water issues covered in this reading? What can we learn from monitoring groundwater depths in the bosque both in the city and to the north and south? What sort of groundwater trends do you expect to see and why?
- Tuesday, 3/2 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall – citation/paraphrasing QUIZ
Activity: 2nd round of EE activity presentations (10-15 min. each)
Assignment due today: reflective analysis for "Water in a Changing World"
Assignment due next week: BEMP website WebQuest – www.bosqueschool.org/bemp.htm
- Tuesday, 3/9 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Activity: 3rd round of EE activity presentations (10-15 min. each)
Assignment due today: BEMP website WebQuest
Assignment due March 24th: write a 2-page reflective analysis for "Bosque Landscape Alteration" (p. 127-166)
RA: Compare and contrast your site with the land alteration techniques described in the reading. Is restoration at your site possible based on its history and/or current conditions?
- Tuesday, 3/16 **NO CLASS – UNM SPRING BREAK!**
Optional: special project hours/extra credit - Monthly Monitoring Collection!
- Tuesday, 3/23 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Lecture: Bosque Disturbance Ecology, how to write final papers (graphing & interpreting data)
Assignment due today: reflective analysis for "Bosque Landscape Alteration"
Assignment due next week: Sandia Mountain Natural History Center (SMNHC) WebQuest
- Tuesday, 3/30 **Field Orientation III:** 4:00-6:00 p.m. Sandia Mountain Natural History Center
Bus leaves from Biology Annex parking lot at 4:00 p.m. **SHARP!**
Assignment due today: SMNHC WebQuest
Assignment due next week: read "Water in the Middle Rio Grande: one observer's view"; write down & submit 3 questions to ask the water panel in class



5 Special Project Hours must be done by Friday, April 2nd.

Due to staff time constraints, if 5 hours are not completed, you will no longer be eligible for extra credit special project hours at the end of the semester.

USGS river-flow website: <http://waterdata.usgs.gov/nm/nwis/uv?08330000>

- Tuesday, 4/6 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Activity: **Water Panel Discussion** - Lisa Robert, Ann Watson & Tom Allen
Assignment due today: submit 3 water panel questions, **ASK 2 questions** of the water panel during their session for full credit
Assignment due next week: e-mail Dr. Eichhorst (kimde@unm.edu) the **First Draft of your Final Paper** (not a rough draft) by **4:00 pm**; repeat & graduate students: = e-mail an outline of your presentation (including graphs)
- Tuesday, 4/13 **Field Orientation IV:** 4:15-6:00 p.m. Tingley Beach (Biopark site)
Meet in the south Tingley Beach parking lot (see Directions page).
Dress appropriately and be prepared for inclement weather!
Objectives: site overview of Tingley Beach & associated wetlands
Activity: pitfall trapping, additional BEMP field work & data collection
Assignment due today: e-mail Dr. Eichhorst (kimde@unm.edu) the **First Draft of your Final Paper to Dr. Eichhorst** (not a rough draft) by **4:00 pm**; repeat & graduate students: = e-mail an outline of your presentation (including graphs)
Assignment due next week: **coordinate** with your site representative for **Monthly Monitoring!**
Assignment due next week: edit your peers' First Draft (you will receive paper via e-mail from Dr. Eichhorst)
- Tuesday, 4/20 **Monthly Monitoring Collection** at assigned site – coordinate with site rep.
Objectives: work with volunteers to collect monthly data (NO CLASS SESSION!)
Assignment due today: e-mail Dr. Eichhorst your edits on your peer's paper by 4:00 pm
Assignment due next week: completed **field notebooks** to be turned in
Optional/Extra Credit Assignment due next week: write a 2-page reflective analysis for "New Mexico Surface Active Arthropod communities in Native and Exotic Vegetation in the Middle Rio Grande Valley"
RA: Summarize what you find to be the most relevant information of this study.
- Tuesday, 4/27 **Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Lecture: surface active arthropods & Final Exam review
Activity: site interaction update, add data to field notebooks & arthropod lab (i.e. pitfall trap insects)
Assignment due today: completed **field notebooks** to be turned in
Optional/Extra Credit Assignment due today: reflective analysis for "NM Surface Active Arthropods" paper (see April 20th)
Returned to you: final paper from Dr. Eichhorst & peer reviewed paper
Assignment due next week: **FINAL PAPER** & SPH oral report
- Thursday, 4/29 **BEMP/Watershed Watch Student Congress:** grades 7-12
Time: 10:00-2:00 pm/Location: to be determined
- Friday, 4/30 **BEMP Student Congress:** grades 2-6
Time: 10:00 a.m. – 2:00 pm/Location: Bosque School
- May 3-7th **Set and Collect Pitfall Traps:** return bugs and forms to Biology Annex freezer!
Setting or collecting 2 sites is *necessary* for class credit; additional help counts towards SPH's!
- Tuesday, 5/4 **Final Class Session:** 4:00-6:00 p.m. Rm. 53 Castetter Hall
Objectives: BEMP **Final Exam** & class evaluation
Activity: repeat & graduate student Final Presentations (approx. 15 minutes each)
Assignments due today: **FINAL PAPER** & SPH oral report
** also turn in: any missing data sheets, equipment, etc. & intern handbook

Additional Notes

This is a three-hour credit course of which we meet for two hours during a class session. Other events and opportunities will develop during the semester, many of which are optional but may be used for extra credit. However, interns are expected to:

- Assist with their assigned volunteer group at monthly collections and pitfall setting/collecting.
- Complete **10 Special Project Hours** that assist in 'forwarding' the BEMP program.
- Present an Environmental Education activity from the BEG (or other environmental educational source).
- Write a reflective analyses for the assigned readings, turn in to Kimi by the beginning of class.
- Write a final report.
- Attend Class.
- **DRESS PROPERLY WHEN IN THE FIELD:** long pants, closed-toed shoes, hat or visor, sun block & WATER.
- Please make sure you also bring: field map & journal and a site map, bug spray, etc. (at your discretion).

