# ENSC 105 ENVIRONMENTAL SCIENCE

**FALL 2015** Syllabus p. 1

**DR. VICKI WATSON, 243-5153, email Vicki.watson@umontana.edu**

**OFFICE:** 101 Natural Science, office hrs: 10am to noon, Wed (usually) & by appointment

**Class Goals:**

Provide students with opportunities to make a difference;

Help students build: scientific literacy; skills in critical thinking, research & self-instruction;

an understanding of the scientific basis of environmental issues, policies, laws;

habits of informed, active participation in social decisions, sustainable living,

and of service to their community and the earth.

**Date** | **LECTURE TOPICS** at a glance | **References (identified at page bottom*)**
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1-Sep | Course goals & mechanics; What is Env. Science? | FP p1-20; C ch1; [www.earthcharter.org](http://www.earthcharter.org)
3-Sep | **Literacy—Scientific & Ecological** | C ch3; FP p13-14 (science or philosophy?)
8-Sep | Ecosystems—energy flow, matter cycles, watersheds | C chs 6.4 & 7 & 12.1 to 12.5
10-Sep | env. fate (you can’t throw it away), biomagnification | FP p21-22 water cycle; AO ch 4 recommended
15-Sep | ecological services, climate change | C ch 8; check out web sites on FP p23
17-Sep | Communities—connections—your actions have many effects | C ch 6 & 10: communities, species interactions
22-Sep | all creatures have a role; kinds of biodiversity | see world community types (ecoregions) at [www.eoearth.org/article/ecoregion](http://www.eoearth.org/article/ecoregion) clickable list
24-Sep | Change/succession, disturbance, condition | C ch 4.1-4.2 & 4.5-4.7
29-Sep | Populations— evolution/adaptation, flexibility | C Ch 4.3-4.4 & 5; Hardin on Cultural K in FP p18
1-Oct | population growth, limits, carrying capacity (K) | FP p25.1 to 25.7, [http://footprintnetwork.org](http://footprintnetwork.org)
6-Oct | Ecofootprints, Ecohandprints | FP p23, [www.panda.org/livingplanet](http://www.panda.org/livingplanet) see reports
8-Oct | ****EXAM 1***** grades posted by Oct 13; last day to drop/change grade system ‘easily’ Oct 27
13-Oct | Scientists & env policy, NEPA, Tragedy of Commons | C ch 2 on env law/policy; FP p26a&b (NEPA)
15-Oct | LAND (MUSY,NFMA, Wilderness Act, etc) | FP p24; full article at [dieoff.org/page95.htm](http://dieoff.org/page95.htm)
20-Oct | WATER (Clean Water Act, etc) & Watershed CPR | C ch 14 + fire ecology web sites on FP p12
22-Oct | LIFE/Biodiversity (ESA, etc) | C ch12.8-12.9 & 18.1; FP p27 (CWA); AO ch 10
27-Oct | AIR (Clean Air Act) | C ch 11
29-Oct | WASTE (RCRA, etc) & TOXICS (TSCA, etc) | C ch 9 & 8

### Using Science to Meet Our Basic Needs Sustainably

**3-Nov** Energy —Kyla Maki, [www.meic.org](http://www.meic.org)

**5-Nov** Shelter—Steve Loken, [LokenBuilders.com](http://LokenBuilders.com)

**10-Nov** Water—Michelle Hutchins, [Travis Ross](http://TravisRoss.com), [Msla Water Quality District](http://www.msla.org; + info on [www.co.missoula.mt.us/wq/](http://www.co.missoula.mt.us/wq/))

**12-Nov** Transportation—[Jordan Hess](http://JordanHess.com) , ASUM trans; [Bob Giordano](http://BobGiordano.com), MIST

**17-Nov** Food —[Josh Slotnick](http://JoshSlotnick.com) , PEAS, [www.gardencityharvest.org](http://www.gardencityharvest.org)

**19-Nov** ****EXAM 2 ******

**24-Nov** films & food

**1-Dec** Class choice of topics: Story of Stuff, Permaculture,

**3,8 Dec** Env impacts of War; Watershed CPR in MT, Cuba, Australia

**10-Dec** Living Sustainably & Equitably, evaluations & fun

**15-Dec** ****MAKEUP EXAM, comprehensive, by appointment only****

**NOTE:** Tues Dec 15, 3:20 to 5:20pm

**REFERENCES:**

FP = Facpac (coursepack); AO = Alice Outwater’s *Water* (one chapter from part I & one from part II)

*C* = Christensen's *Environment & You* or any env science text (use table of contents & index to find lecture topics)

*** See EVST’s online calendar [www.umt.edu/conservationcalendar](http://www.umt.edu/conservationcalendar) for field trips, service options, etc

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*subject to change*

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