

1-2013

ENST 560.01: Environmental Impact Analysis (EIA)

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ENST 560 Environmental Impact Analysis (EIA), Spring 2013 Draft – Subject to Change

Instructor: Vicki Watson, 101 Natural Science, 243-5153; office hrs: TR 2:15-4pm.

Course goals: Students will be able to explain and answer questions about:
Policy & Science of the EIA process, including:

Jan & Feb: What is required by NEPA (National Environmental Policy Act) and MEPA (MT version) & by agency rules to carry out these laws?

What are the roles of the US CEQ and of Montana's EQC?

What laws require EIA & how do they interact with NEPA/MEPA?

How does one organize an interdisciplinary team and an EIA?

What are the weaknesses and strengths of the EIA process?

How is an effective public participation program designed?

How have NEPA, MEPA & EIA process changed over the years?

READ: CEQ. 2007. A Citizen's Guide to the NEPA—Having Your Voice Heard. 49 pp.

http://ceq.hss.doe.gov/nepa/Citizens_Guide_Dec07.pdf

See also <http://ceq.hss.doe.gov> and <http://ceq.hss.doe.gov/nepa/nepanet.htm>

EPA's guidance on NEPA www.epa.gov/compliance/resources/policies/nepa/

March & April:

What are some scientific approaches/tools used in EIA? Where can one obtain credible info for EIA?

Students select topic areas based on their interests. Potential sources:

International Assn for Impact Assessment www.iaia.org book methods chapters 25-32 (free online)

[Anjaneyulu, Y.](http://www.anjaneyulu.com) & V. Manickam. 2007. Environmental impact assessment methodologies. 2nd ed, library

E-book

CEQ [online](#) guidance & journal articles on risk assessment, cumulative effects analysis, EJ, transboundary impact analysis, climate change, life cycle analysis, EROEI analysis.

May – Student presentations.

Final meeting time assigned to us by registrar – Monday, May 13 from 8am to 10 am.

Student responsibility:

Each student will write 1-2 papers addressing academic & applied aspects of EIA and give at least 2 presentations to the class. These papers can address an EIA document currently out for public review (or write your own version), critique some category of impact assessment methods, evaluate EIA procedures or policies of an agency, trace history of an EIA concept or policy, or any other approved topic. Group projects OK.

Presentations will be on one of the papers, and an oral report on a relevant public meeting or an interview with an agency's NEPA/MEPA officer.

EVST Students should also attend some Env. Leadership events – see handout on these.

Grading: 300 pts total

For 1-2 papers: 20 for proposal, 30 for progress report, 100 for paper

Presentations: 50 for presentation on a paper

50 pts for oral report on relevant public meeting or agency interview.

Participation: 50 pts

References:

Web sites of US CEQ and of Montana's EQC (will be emailed)

EIA books at the Mansfield library (some on reserve; will email tables of contents of all)

Additional references on Reference list (will be emailed)

Required Work and allocation of points

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1-2 papers-- 150 pts (20 for proposal, 30 for progress report, 100 for paper, if write 2 papers – each is worth half these points);
2 Presentations: one on one paper --50 pts; one on agency rules or relevant public meeting --50pts ; Participation 50 pts

1) An academic paper (sort of a mini-**thesis**) that attempts to be an original creative work. It may involve carrying out an original study designed by you that collects data to answer a question or test a hypothesis. It may instead involve analyzing data collected by others, once again to answer a question or test a hypothesis. These data may come from government data files or appear in the open literature. Often you will be pulling together data from several sources and using it to answer a new question. The paper could also be a review paper on some topic, but it is often a challenge to be really creative and original with this approach. Your goal is to advance our understanding of a subject (try to teach me & other academics something). The paper should be publishable. You should identify a target publication and write the paper in its style. It is wise to identify a model paper that accomplishes a similar goal to yours and ask if a paper with a similar goal/format/sophistication, etc is appropriate. Make use of refereed literature as well as other sources.

2) A more applied paper aimed at an off campus target audience (sort of a mini **professional paper**). You will act as a consultant to some off campus target audience. Identify a need and fill it. You might: investigate a subject and develop a position paper or action plan for them (based on scientific info and group's values); critique an EIS or other government decision; conduct a survey or other study that gathers/analyzes data; develop a curriculum or exercise for a teacher. Often this paper will address an issue that may be of local interest only; or address very site-specific questions (ie analyzing local data to address how a site should be managed, restored, etc). The level of sophistication depends on the target audience (but the science must be scientifically defensible).

The two papers can be on the same or different subjects. Either can be produced first. Often the timing needs of the applied paper may dictate this (there may be a deadline for comments, for example). **THE TWO PAPERS MAY BE COMBINED INTO A SINGLE PAPER IF IT CAN SATISFY THE GOALS OF BOTH.**

Length of paper(s): About 20 pages total (+/- 5) of original, well written, tightly crafted, no-wasted-words prose. These pages may be allocated between the two papers as you see fit. (Two 10 pp papers or one 15 pp and one 5 pp). Don't worry about the exact number of pages. It should be as long as it needs to be to address the question, explore the relevant literature, & treat the subject at the agreed upon level of sophistication. Don't put in unnecessary words or explanation to fill up space and don't cut it shorter than you feel necessary to fit into some length. The page guidance given above is to help you establish the scope of the paper. And also to remind you that not much that is longer than 10-20 pages ever gets read or published. If you wish to emphasize one paper over the other, you may negotiate for reapportioning points.

Suggested Milestones (negotiable). Can email me all assignments but the paper –that I need in hard copy & e-copy. Note: I will need at least a week to provide feedback after receiving something in writing.

Week of course: if writing 2 papers, observe these milestones:

3rd —Proposal for first paper 6th — Progress Report 8th —First paper due
10th —Proposal for 2nd paper 12th — Progress Report 14th —2nd paper due
1 paper: 3rd —Proposal; 8th —progress report; 12th —draft paper; 14th —final paper
14-15th—Presentation on one of the two papers (you can negotiate for an earlier time)

Proposal: Explain need for the project/paper: explain questions/hypotheses to be addressed.
Who is the target audience or target publication?
How will you address this question/hypothesis? What study design & methods?
What do you plan to produce and how can it be used?
What relevant resources have you located so far? What problems do you anticipate?
What is your timeline for milestones? (be specific to your project—dont give me my timelines)
Optional – but good practice: Discuss your qualifications for doing this work. Give a budget.

Progress Report: Explain any changes from original proposal; provide detailed outline of paper:
And a bibliography of the sources collected to date (use the CBE citation style; guide emailed on request).

Paper: Single space (double space between paragraphs). Double-sided preferred. Provide 2 copies: one to mark up & return; one for me to keep. Also a copy on disk. **DO NOT EMBED** tables, figures, in text. Put them all at the end. If they are large, put them in a separate file. Keep formatting simple and easy to edit. NUMBER PAGES. If you write a single paper, a double spaced draft is due at least 2 weeks before final is submitted. Revise based on my comments.