



Environmental Assessment and Impact Analysis

Geography 3963/5963

Spring Semester 2006

Wednesday, 4:35 – 7:05 pm

OSH 113

Instructor: Matt Petersen

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Office Hours: By appointment

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Course Objectives

This course focuses on a “nuts-n-bolts” approach to environmental impact assessment. We will survey methods and tools used to assess baseline resource conditions, analyze potential impacts, and ways to summarize, organize, and present those data so that informed decisions can be made.

Students will:

1. Develop an understanding of the basic EIA process and how this is embodied under the National Environmental Policy Act (NEPA) in the U.S.
2. Learn how to identify viable project alternatives, identify resource issues of concern, and define thresholds of significance.
3. Develop familiarity with methodologies used for impact prediction on the physical-chemical, biological, cultural, and socioeconomic components of the environment.

4. Learn how to present data clearly to properly disclose impacts and support informed decision-making.
5. Gain practical experience conducting EIA through NEPA.

Texts

Marriott, B. B. 1997. Environmental Impact Assessment: A Practical Guide. New York: McGraw-Hill.
 Munier, N. 2004. Multicriteria Environmental Assessment: A Practical Guide. Kluwer Academic Publishers

Course Format

The course will follow a seminar format. This means that students will be required to actively participate in a meaningful way. Class attendance is essential! This course will essentially be a more in-depth detailed version of courses that are taught to experienced agency and private sector environmental professionals throughout the country. It provides practical techniques to developing accurate and defensible environmental analyses for agency and public review.

Over the course of the term, there may be times that business requires me to travel or work in the field during scheduled class times. I will do my best to minimize these intrusions and will attempt to give a week’s notice if such becomes necessary.

Graduate students enrolled in GEOG 5963 will be required to complete a research paper on an approved topic of their choosing.

University Policy: “Persons with disabilities requiring special accommodations to meet the expectations of this course are encouraged to bring this to the attention of the instructor as soon as possible. Written documentation of the disability should be submitted during the first week of the semester along with the request for special accommodations. To do so, contact the Center for Disabled Student Services, located in room 162 Union Building, 581-5020.”

Grading Policy

1. You are responsible for all reading assignments, handouts, in-class exercises, and lecture material. If you miss a class, obtain notes from a fellow student.
2. Your final grade will be based on the following:

<u>Requirement</u>	<u>Points</u>	<u>% of Grade</u>
Worksheets/In Class Assignments	200	40
EA/EIS critique	100	20
Group Project	200	40
Graduate Research Paper*	—	—
Total	500	100%

*Graduate research papers will be graded, but will receive no points. To receive class credit, papers must be of acceptable quality and turned in by the end of the term. “Acceptable quality” means it must earn a grade of “C” or better.

3. Grades are calculated by adding the total points earned over the course of the semester. Any decimal places in the final point value will be rounded up or down using standard rounding conventions (e.g., a total point value of 399.4 would be rounded down to 399—giving a ‘C+’; whereas 399.5 would be rounded up to 400—giving a ‘B-’). There are no exceptions to this method of calculation.

Grade Scale:

	<u>Percentage</u>	<u>Points</u>
A	93-100%	>465
A-	90-92%	450-464
B+	87-89%	435-449
B	83-86%	415-434
B-	80-82%	400-414
C+	77-79%	385-399
C	73-76%	365-384
C-	70-72%	350-364
D+	67-69%	335-349
D	63-66%	315-334
D-	60-62%	300-314
F	<60%	<300

4. No one will be excused from exams or assignments during the scheduled times **without prior permission**. Missed exams or assignments (including in-class assignments) are counted as zero.
5. Grades for late assignments will be reduced by 10% for each day (not class period) that it is late.
6. Assignments may be e-mailed, if necessary. The timestamp on the e-mail will be used to determine date of submittal.

Class Calendar

Date	Topic	Readings	Assignments
Jan 10	Course introduction Environmental Impact Assessment EIA/NEPA overview – Matt Petersen		
17	Defining project scope Developing alternatives Area of impact	Marriott – Ch. 3, 4	http://www.gpoaccess.gov/fr/index.html (search for “notice of availability” and “EIS”)
24	Direct and indirect impacts Cumulative impacts Connected actions		EA/EIS critique subject approved
31	Environmental indicators Significance Thresholds Collecting data	Munier – Ch. 3	Take home worksheets
Feb 7	Identifying potential impacts: Checklist Network Analysis Matrix	Munier – Ch. 4 (pp. 69-84)	Take home worksheets
14	Identifying potential impacts: Overlays Delphi Method Dose-response Stepped Matrices	Munier – Ch. 4 (pp. 84-95)	Take home worksheets
21	Assessment techniques: Geospatial analysis (GIS) Contingent valuation (willingness to pay)	Munier – Ch. 5 (pp. 99-105)	In class assignments
28	Socio-economic assessment techniques – Dr. Julie Nelson Benefit-cost analysis (BCA) Cost effectiveness analysis (CEA)	Munier – Ch. 5 (pp. 105-117)	In class assignments Group Project Approved Graduate Research Topic Approved
Mar 7	Assessment techniques:	Munier – Ch. 5 (pp.	

	Multicriteria analysis (MCA)	132-140)	
14	SPRING BREAK!!		
21	Assessment techniques: Analytical hierarchy process (AHP) Risk assessment	Munier – Ch. 5 (pp. 145-146, 172-175)	
28	Group Project	Marriott – Ch. 5, 6, 7, 12, 13, 14, 15, 18, 19, 20, 21, 22	EA/EIS critique
Apr 4	Group Project	Marriott – Ch. 5, 6, 7, 12, 13, 14, 15, 18, 19, 20, 21, 22	
11	Group Project	Marriott – Ch. 5, 6, 7, 12, 13, 14, 15, 18, 19, 20, 21, 22	
18	Presentations	Marriott – Ch. 5, 6, 7, 12, 13, 14, 15, 18, 19, 20, 21, 22	
25	Presentations		Group Project Graduate Research Paper