

Geography 303/503

PROCESSES OF ENVIRONMENTAL DEGRADATION

Winterim 2023

Professor: Samantha Kaplan

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Office Hours: By appointment

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Required Text: Goudie, Andrew, 2018. *The Human Impact on the Natural Environment*. Eighth Edition. Malden, MA: Blackwell, 357 p.

Students with Disabilities: Students with learning and/or physical disabilities are encouraged to contact me to make any special arrangements for quizzes and assignments.

Course Description: 3 Credits. Explore why and how humans harm the natural environment with particular emphasis on the physical processes and mechanisms that result in degradation. Case studies from around the world illustrate the geographic, cultural, political, and economic causes and consequences of environmental degradation in both modern and ancient contexts, as well as future projections of environmental transformation through human action.

Requirements Satisfied: GEP: Environmental Responsibility (ER)

Learning Outcomes: Upon completion of this course students will be able to:

- Demonstrate an understanding of the historical context and current status of degradation that occurs in human-dominated ecosystems.
- Discuss verbally and in writing concepts related to the anthropogenic causes and effects of physical, chemical, and biological degradation.
- Identify interactions between human society and the natural environment.
- Analyze the individual, social, cultural, and ecological factors that influence environmental sustainability.
- Evaluate competing claims that inform environmental debates.

Class Description and Policies

- This is a 100% asynchronous distance learning course
- There are no mandatory class meetings

- There will be a recorded video lecture each official class day (approx 30-45 min each)
- Please make sure you have watched the lectures for the day before asking questions about content or assignments.
- E-mail communication must contain a subject line, the course number (Geog 303) and be courteous and coherent for a response.
- Canvas will be used for most course communication outside of recorded lectures. Please check Canvas regularly for course updates and announcements.

Assessment

Grades will be based on:

- Quizzes - Two non-cumulative lecture-based quizzes
- Oral presentation and peer review of an environmental movie
- Short answer exercises – three-to-four weekly question sets based on course readings or videos

Evaluation:

| | Percent |
|------------------------------------|----------------|
| Quizzes (2 @ 13% ea.) | 26% |
| Oral presentation (movie review) | 14% |
| Peer review of presentation | 4% |
| Reading question sets (8 @ 7% ea.) | 56% |
| Total | 100% |

Please note that individual assignments and quizzes will have their own number of points for scoring purposes, but it is % contribution of each assignment that counts towards the overall course grade.

Final Letter Grades: Letter grades will be assigned as follows:

| Percent | Letter Grade |
|----------------|---------------------|
| ≥93 | A |
| 90-92.9 | A- |
| 87-89.9 | B+ |
| 83-86.9 | B |
| 80-82.9 | B- |
| 77-79.9 | C+ |
| 73-76.9 | C |
| 70-72.9 | C- |
| 67-69.9 | D+ |
| 62-66.9 | D |
| <62 | F |

Student Rights and Responsibilities:

- UWSP has guidelines regarding student rights and responsibilities in class and on campus. These are outlined on the Dean of Student's website and in the Student Handbook. Do review these resources if you have not already:
 - <https://www.uwsp.edu/dos/Pages/stu-conduct.aspx>
 - <https://www.uwsp.edu/dos/Pages/stu-academic.aspx>
 - <https://www.uwsp.edu/dos/Pages/handbook.aspx>
 - <https://www.uwsp.edu/dos/Documents/AcademicIntegrityBrochure.pdf>
 - <https://www.uwsp.edu/dos/Documents/UWSP14-Final2019.pdf>

Class Schedule

| Date | | Topic | Lecture Reading | Assignment Reading | Assignment Posted | Assignment Due |
|------------------|--------|---|---|--|------------------------|---|
| T | 3-Jan | Humans and the Environment | Ch. 1 p. 1-6; Vitousek et al (1997) Human domination of Earth's ecosystems | J. Diamond, Collapse, Ch. 1 | Montana | |
| W | 4-Jan | Population and IPAT | Ch. 1 p. 6-25; | | Movie review | |
| R | 5-Jan | Biodiversity | Ch. 2 p. 27-32; 71-72; Ch. 3 p. 75-81, 98-108 | M. Pollan (2006) Omnivore's Dilemma | Food Production | |
| F | 6-Jan | Invasive species | Ch. 2 p. 32-38; | | | Montana |
| S | 7-Jan | Vegetation Impacts & Extinctions | Ch. 3 82-98 | E. Kolbert (2014) The Sixth Extinction Ch. I; Ch. 10 | Biodiversity | Movie Selection |
| 8-Jan | | | | | | |
| M | 9-Jan | Deforestation | Ch. 2 p. 39-49; Ch. 8 p. 271-278; Williams (2001) The History of Deforestation | | Deforestation | Food Production |
| T | 10-Jan | Soil Impacts & Desertification | Ch. 4 p. 111-121, 138-143; Pimental and Burgess (2013) Soil erosion threatens food production | | Soils | Biodiversity |
| W | 11-Jan | Quiz 1 (topics through deforestation) | | | | |
| R | 12-Jan | Surface Water Systems | Ch. 5 p. 155-168; Hoekstra and Mekkonen (2012) The water footprint of humanity | E. Kolbert (2021) The Lost Canyon Under Lake Powell | Lake Powell | Deforestation |
| F | 13-Jan | Groundwater & Water Pollution | Ch. 5 p. 168-182, Ch. 6 p. 192-198 | R. Carson (1962), Silent Spring, Ch. 4 | Silent Spring | Soils |
| S | 14-Jan | Coastal Impacts & Oceans | Ch. 5 p. 182-185; Ch 6 p. 223-230; Ch. 9 p. 283-298 | N. Oreskes and E. Conway (2014) The Collapse of Western Civilization Ch. 1 | Climate and the future | Lake Powell |
| 15-Jan 16-Jan | | | | | | |
| T | 17-Jan | Air Pollution & Ozone Hole | Ch. 7 p. 252-265 | N. Oreskes and E. Conway (2014) The Collapse of Western Civilization Ch. 2 & 3 | Air Pollution | Silent Spring |
| W | 18-Jan | Climate Change | Ch. 7 p. 233-242; Ch. 8 267-278; Ch. 10 301-304; Ch. 11 313-316, 322-328 | | | Movie Review - Oral Presentation |
| R | 19-Jan | Future Climate | Ch. 8 267-278; Ch. 10 301-304; Ch. 11 313-316, 322-328 | | | Air Pollution |
| F | 20-Jan | Quiz 2 (topics of soils through climate) | | | | Climate and the future |