

Conservation of Natural Resources

FOR 260 (CRN: 21013) 3 Credits (2 hrs lecture, 3 hrs lab/week)

Spring 2019

Instructor: Dr. Rebecca Franklin
Office: CAS 207
Office hours: Monday 10:30 – 11:30 am
Tues/Thurs 10:30 – 12:30 pm
(or by appointment)
Phone: 541-330-4378
Email: rfranklin@cocc.edu

Lecture: Tuesday + Thursday
Location: CAS 201
Time: 09:00 – 10:00 am
Lab: Tuesday, 12:45 – 4:05
CAS 201/Field locations
Final: Thursday, June 13, 2019
08:00 – 10:00, CAS 201

Required text: Natural Resource Conservation: Management for a Sustainable Future (10th Edition) Daniel D. Chiras and John P. Reganold 2009 ISBN 978-0132251389 (1 copy on reserve at library)

Other required readings will be posted on Blackboard.

Recommended! A Sand County Almanac. Aldo Leopold, 1949. Oxford University Press. 295 pp

Course description: This course provides students with a diverse overview of the conservation and management of natural resources. Course objectives are to recognize the finite limits of non-renewable resources and the social costs of resource utilization, while stimulating critical thinking and developing global perspectives. Current local, regional, and global issues are examined.

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Grade Structure:	Item:	Quantity:	Points Ea.:	Total:
	Participation	1	100	100
	WeeklyQuiz/reflections	~10-15	10	100-150
	Article reviews:	2	20	40
	Labs:	8	20	160
	Homework assignments	3	15	45
	Term project	1	100	100
	Midterm exam	1	100	100
	Final exam	1	100	100

~ 735-785 points

Grading:	Grade	% of total pts:	Grade	% of total pts:
	A	92 – 100	C+	77 – 78
	A-	89 – 91	C	70 – 76
	B+	87 – 88	D	60 – 69
	B	81 – 86	F	≤ 59
	B-	79 – 80		

CLASS AND LAB ASSIGNMENTS

Article Reviews/HW/Labs are due at the beginning of class (or via TurnItIn) ~one week after they are assigned. Late assignments are not accepted. Only one HW assignment can be made up with PRIOR APPROVAL for half credit. If you do not notify me (or leave a message on my phone) you cannot do the makeup.

1. Article reviews

Article Review #1 due Thursday, week 3 (or earlier) via "TurnItIn"

Article Review #2 due Thursday, week 7 (or earlier) via "TurnItIn"

Deductions: Late = -10%/day; emailed w/o permission = -5%

The Article Review assignment is to give you experience reading and interpreting peer-reviewed articles in science journals.

Select a peer-reviewed science article from the list below, or from online journals accessed through the Barber Library. Articles should be from within the last 5 years (~2010 – present).

Read the article. Abstract, Introduction, Results, Conclusions, and Discussions are all separate sections of the article that will give you specific information on how to complete the five sections of this assignment. When you are ready to complete this assignment, answer the following five sections. Be concise with your explanation to each part. There are no maximum or minimum word counts for each section; just thoroughly address each section. Your article review must be typed, double-spaced, and in 11-12-point font with a heading including your name, date, course number (i.e. FOR111), and assignment name. Include the following 5 sections as subheadings:

Section 1: Provide a reference for the article. Here is an example of the correct format for a journal article:

Hendee, J.C., and Randall, P. 1997. The growth of Environmental and Conservation-Related Organizations. *Renewable Natural Resources Journal*. Vol 10(2): pp. 6 – 19.

Section 2: What is the question that this article is trying to answer? The Abstract and Introduction will help with this question.

Section 3: How did the authors go about trying to answer their question? Methods, or Methodology will help answer this question.

Section 4: What did the authors find? What were their results and conclusion? Results and Conclusions are sections that will help you answer this question.

Section 5: What are the implications of this article: what does it mean for forestry (or wildlife or recreation etc)? Or, how will this research affect management in the area of study addressed in this article? You can also include any thoughts or impressions you had about the research, quality of the work, etc in this part.

List of suggested journals (other may be appropriate, check with me first!)

American Forests	High Country News	National Parks
Audubon	Journal of Forest History	National/International Wildlife
CA Fish and Game	Journal of Forestry	Northwest Science
Canadian Journal of Forestry	J. of Soil and Water Conservation	Renewable Nat'l Res. Journal
The Condor	Journal of Wildlife Management	Sierra Club Bulletin
Ecology	Journal of Range Management	Wilderness
Evergreen	National Geographic	Wildlife Society Bulletin
Forest Log	Natural History	Wilson Journal of Ornithology
Forest Science	Natural Resources Journal	

2. Term Project and Presentation

The Assignment

This assignment is designed to allow you to become more intimately familiar with an issue in resource conservation and management. It is also intended to give you practice at presenting information to your peers in a semi-formal setting. Select a natural resources issue that you have some interest in. It can be local, regional, or even global. Research and involve yourself in the issue. This means attending public meetings, interviewing people, researching and reading magazine, journal, and newspaper articles, and using any other means at your disposal to gather information on the issue. You will then present your project in a 10 minute oral presentation during lab in week 9. You may complete projects in pairs (however, no more than pairs). Both students will be required to participate equally in the presentation for full credit.

Requirements

- Your level of issue involvement will vary depending upon the issue you select. Obviously you cannot be expected to attend public meetings should you select a broad issue such as global warming or tropical deforestation. However, putting good effort into research, documentation, and involvement will improve your grade. *Do not just Google 3 articles the night before it is due and cough up a presentation!* Your telephone is a great source of information - use it! Personal interviews with local people involved in the issue are also excellent sources of information. The internet is very powerful as well, but don't rely on it exclusively.
- The main body of your presentation should focus on analysis of the issue:
 - a. What is the issue? Who are the parties involved? (Agencies, private individuals, humanity, etc.)
 - b. Are there conflicting sides or views related to the issue?
 - c. What sorts of environmental effects or ramifications are there?
 - d. What are your thoughts on solutions, management directions, or changes in policy required to resolve the issue? Is there any way to resolve the issue (in your opinion)?
- Your presentation will be evaluated based on organization, clarity, development of your arguments, and thoroughness of research.
- Your write up will have an introduction to the issue, and a concise summary of the points you will cover in your presentation, i.e., points a – d above, and a conclusion of your research and thoughts on the issue, i.e., point d above.
 - You must hand in a complete bibliography listing all your sources, including periodical literature, books, interviews, and internet sources.

Potential Issues - anything related to the use, management and conservation of our natural resources. The following is a list to get you thinking. You are by no means limited to these topics.

Global climate change	Water management in Central Oregon
Forest health/insect epidemic	Urban waste management/recycling
Endangered fish/Colombia basin issues	Wolf management in Oregon
ORV use on public lands	Fire policy in National Parks/National Forests
Raw log exports	Antlerless deer hunting in Oregon
Use of dogs in hunting	Deer and development in Central Oregon
Public transportation	Tire pyrolysis plant at Knott Landfill
Fire management in Oregon	Issues related to wildland/urban interface

Rubric for Term Project + Presentation :

	Excellent (5)	Good (4)	Fair (3)	Poor (0-2)	Grade
Introduction (10)					
Body (30)					
Conclusion (10)					
Thoroughness of research (10)					
Delivery, clarity (10)					
Visual Aids (10)					
Organization -intro, body, concl. (10)					
Handling of Questions (10)					
Overall Grade					

3. Labs

Each lab has a 20-point value. Half of the points are for being present –the other half of the points are for participating in discussions, asking questions of our hosts, and for completing any worksheets that are utilized. You can always fill out and complete the worksheets during the trip and hand them at the end of the lab. Otherwise, they are due the following Tuesday (indicated on the schedule).

4. XC options

You may accrue up to 15 points in XC over the quarter

- Ancient Forests: Rage Over Trees (video)
Check out video from library, complete worksheet/writeup
(5 pts)
- Wild by Law: The Rise of Environmentalism and the Creation of the Wilderness Act (video)
Check out video from instructor, complete worksheet/writeup
(5 pts)
- Events from the Deschutes Land Trust, McMenamin’s OSU Science Pub, Oregon Natural Desert Association talks, High Desert Museum Natural History Pub, etc.
I will post these events as they are made available
<http://www.deschuteslandtrust.org/events>
<http://www.mcmenamins.com/421-old-st-francis-school-home>
<http://www.highdesertmuseum.org/upcoming-events>
<http://osucascades.edu/science-pubs>

>>See me first to confirm an event is suitable<<
(points will vary, up to 10 pts cumulative for multiple events...)
- Wilderness Trail Clearing Day
Contact Dr. Ron Boldenow for arrangements
Memorial Day Weekend (Friday and Saturday)
(10 pts)

PREPAREDNESS AND POLICIES → Read this thoroughly!

1. Many labs will occur outdoors – be appropriately prepared!! This means being adequately dressed for the conditions, and having any required equipment, *Cold wet, snowy weather could occur on at least some labs during the course of this class – be prepared!*
2. Attendance and missing labs and quizzes: Effective learning in this course is heavily dependent on your presence in class. You are expected to attend both lab and lecture. Excessive absenteeism WILL affect your grade. If you miss class, it is your responsibility to notify me in person or by phone message and to make arrangements to make up assignments missed due to an absence (in some cases of emergency this may not be possible). If you are going to miss an exam I need to know about it in advance even if it is the day of the exam. Leave a message! Important because there will be NO MAKE UP EXAMS without prior notice!
3. Final Exam: The date, time and location of your final exam is printed here in the syllabus. You will be made aware of this information on the first day of class, which gives you 2 ½ months advance notice as to when and where the final will be taking place. Exam time is not something that is subject to negotiation to fit student's convenience or personal plans. Exam times will be changed only for serious and compelling reasons, by petition and consent of instructor and department chair. NOTE: seasonal jobs which begin before the end of finals week, or specialized training provided by agencies which occurs during finals week, does not constitute a serious and compelling reason. Discuss these conditions with your employer prior to accepting a job or agreeing to attend training.
4. Learning Environment Behavior: Sexual harassment in any form is not tolerated by COCC – refer to the posting on the Ponderosa bulletin board for definitions and assistance with sexual harassment complaints. Professionalism: students are expected to behave professionally at all times during class, extending all courtesies and considerations expected in a public forum. Breaches of professional conduct will affect your grade. This includes the use of vulgar language, any form of harassment or disruption of classmates, and the use of cell phones in the classroom. Failure to prevent your cell phone from ringing, vibrating, beeping, or otherwise disrupting the class will affect your professionalism grade. First offense: warning. Second offense: loss of points. Third offense: loss of full letter grade, or removal from the course. If you have questions regarding this policy or would like further clarification, please do not hesitate to see me.
5. Tobacco use: Tobacco use of any kind is not permitted in COCC buildings, in the vans, or during field labs. If you cannot refrain from smoking or chewing during class, you will be asked to leave. Violations of the tobacco policy will be treated under the professionalism policy spelled out above.
6. ADA Statement: Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, no later than the first week of the term. Students any also wish to contact the COCC Disabilities Services Office in Boyle Education Center, Anne Walker awalker@cocc.edu, 541- 383-7743.
7. Insurance Statement: Students are not covered by medical insurance while on campus or involved in college classes and activities. Students are responsible for their own medical and dental insurance coverage. Information on student insurance coverage can be obtained at the student health center in Grandview or at the cashier in the Boyle Education Center. If you have specific questions or concerns regarding student insurance coverage you should discuss them with the Instructor.
8. Plagiarism Statement: All students are expected to practice the highest standards of academic honesty. Cheating on assignments, quizzes or exams or plagiarizing other people's work is unacceptable and may lead to a failing grade in the class or a zero on the assignment. Plagiarism is using, borrowing or stealing someone else's words or ideas without giving appropriate credit to the original author. This includes copying definitions and sentences from textbooks, other student's papers, the Internet or any other source. Students are expected to complete all assignments independently, unless it is a designated group project.
9. Physical Contact: Due to the nature of this course, students are advised that physical contact between the instructor and student, or student to student may occur during class and lab. If you have concerns about these requirements, you are encouraged to discuss these with the instructor prior to the next class session to determine if appropriate alternative assignments exist. If you do not think you will be able to participate to the extent required by the course, you are encouraged to drop the course within the appropriate deadlines in order to obtain a refund.
10. Civil Rights: COCC is an affirmative action, equal opportunity institution. Beth Wickham bwickham@cocc.edu 383-7290.

Week/Date	Topic	Readings for Class Discussions*	HW/Lab DUE	TUESDAY LAB	
1	4/02	Introduction, course overview, conservation/preservation/resource econ	Ch1- Nat Res Management	---	L1: no lab
	4/04	Tragedy of the Commons	Ch 2 Economics + Ethics	---	
2	4/09	Resource economics, population growth, carrying capacity	Ch 4- Human population		L2: Population and Sustainable Growth, Leopold's Land Ethic (classroom)
	4/11	The Land Ethic: Aldo Leopold reading	The Land Ethic PDF	---	
3	4/16	Forest Management: conflicts in the PNW, restoration, alternatives	Ch 14 Forest Mngmt PDF: handout	L2: Population write-up due	L3: Film: <i>Behind the Emerald Curtain</i> . (classroom: film and post-film critique)
	4/18	(no lecture)	---	Article Review #1 due	
4	4/23	Dendrochronology, river flow and the Colorado River Compact	Dendrochronology reading	---	L4: Dendrochronology: fire history and crossdating (classroom)
	4/25	PNW Drought and whitebark pine issues	Whitebark pine reading	---	
5	4/30	Water: basic hydrology, conservation + management	Ch 9- Aquatic Environs + Ch 10- Water Resource Mngmt	Water Resources HW due L4 Dendro write-up due	L5: Tumalo Creek Diversion (field)
	5/02	Water: Fisheries Conservation (guest speaker Bret Michalski, COCC)	Ch 12- Fisheries Cons.	(take-home midterm!)	
6	5/07	Landfills, waste management, e-waste	Ch 17- Sustainable Waste Mngmt Ch 21: Minerals/Mining	L5 Tumalo Creek writeup due	L6: Knott Landfill Visit (field)
	5/09	(no lecture -FOR130 chainsaw course starts)	---	---	
7	5/14	Humans and Climate: "hot topics" in Climate Change	Ch 19- Global Change, IPCC summary reading	L6 Landfill writeup due	L7: Green Building Scavenger Hunt (Sean Rule's house)
	5/16	Renewable Energy: local resources, wind, solar, biomass, issues for the future	Ch 22: non-renewable issues Ch 23- Sustainable Energy	Article Rev. #2 due	
8	5/21	Aspen Ecology and Restoration	Aspen Reading	L7 Green Building lab sheet due	(L8: No Tuesday Lab) Thurs/Fri: Aspen Trip May 23 + 24: Malheur NF
	5/23	(in Malheur NF –aspen restoration lab)	Field Trip Aspen Reading	---	
9	5/28	Sage grouse management issues (guest speaker Garth Fuller, The Nature Conservancy)	Ch 16- Wildlife Mgmt Sage grouse reading	---	L9: <i>Artemisia</i> UV fluorescence -identifying sagebrush using coumarin levels (classroom)
	5/30	What happened during the Malheur Occupation? And why?	Malheur/range/grazing reading	Aspen Trip Write-up due	
10	6/04	Wild horse management- Ochoco NF, Nevada BLM land	High Country News: Wild Horse section	Snow Goose Assignment due	Term Project Presentations (classroom)
	6/06	Final Exam review session	Study guide on Bb	(all XC due!)	
Finals Week	FINAL EXAM: Thursday, June 13, 2018 / 08:00 – 10:00 / CAS 201				

* All readings taken from Natural Resource Conservation: Management for a Sustainable Future (10th Edition) Daniel D. Chiras and John P. Reganold 2009 unless otherwise noted. Other readings will be posted on Blackboard.