

Natural Resource Conservation and Policy

-OR-

How can we live more sustainably on this wonderful planet?

*To answer this question, we will need radically new ways of approaching problems.
I hope these will give you inspiration:*

Dare Mighty Things”

— Motto, NASA Jet Propulsion Laboratory

**“The bigger the problem,
the bigger the opportunity.”**

—Vinod Khosla, Venture Capitalist

**“The best way to get a good idea is to get a lot of
ideas.”**

—Chemist Linus Pauling

**“Start by doing what is necessary; then do what’s
possible, and suddenly you are doing the
impossible.” —Francis of Assisi**

**“We all know your idea is crazy. The question is
whether it is crazy enough.”**

—Nobel Physicist Niels Bohr

“Have a healthy disregard for the impossible.”

— Larry Page, co-founder of Google

**“If you want more successes, you’re going to have
to live with more failures. You can’t have one
without the other.”**

—Tina Selig, Professor of Entrepreneurship,
Stanford University

Instructor: Dr. Susan Todd

Associate Professor of Conservation Planning

Email: susan.todd@alaska.edu (best way to reach me)

Office Location: 349 O’Neill Bldg, UAF

I am happy to meet you at your convenience by phone,
Zoom, or in my office. Email me to schedule at
appointment.

Teaching Assistant: Jason Clark

Interdisciplinary PhD Student in Ecology & Hydrology

Email: jaclark2@alaska.edu

Jason will be grading most of the quizzes and
assignments. Check with him first if you have
questions on the grading of those.

What is Natural Resource Conservation?

My favorite description of natural resource conservation:

“The oldest task in human history,” wrote Aldo Leopold, “is to learn to live on a piece of land without spoiling it.”

- **The primary goal of natural resource conservation is to supply what humans need while trying to minimize impacts on the environment.**
- **It combines science (primarily biology) and policy (decision making).**

Resource conservation is about survival of both humans and our planet. We literally cannot survive without resources from the natural world. They supply our food, lodging, clothing, energy, clean water and even our oxygen! But we must minimize our impacts because over the long-term, human welfare and environmental quality are inseparable. The environment can live without us, but we can’t live without it.

Course Description

The course examines the history of conservation and its ecological, economic and social foundations. First we discuss the basic principles of resource management including sustained yield, ecology, and the effects of world population growth. With this foundation, we take a more detailed look at the management of specific resources, including soils, agriculture, rangeland, forestry, wildlife, and fisheries, then fossil fuels and renewable energy.

The course takes the long view. Most of our resource problems have been caused because people put short-term interests over their own best interests over the long run. In addition to that, the history of natural resource management is a key part of the last 10,000 years of human history. As poet Gary Snyder put it, resource management began when we “stopped chasing our food and started growing it.” All of civilization is based on natural resource management. NRM has greatly increased the carrying capacity of the Earth for humans, but often at the expense of other species. Throughout its history, NRM has put people first and short-term over long-term goals. We need to change that. We need to take a long view toward the future and think of many generations down the road. What will we leave for them?

In addition to taking the long view, the course takes a global view. Since the days of the spice trade, natural resource management has had global implications. Now there are so many humans on the planet that we are having impacts on the entire planet and its climate. Natural resource managers are working hard to reduce these impacts, but it will require very creative thinking to overcome them.

Themes

- Human survival depends on resource conservation.
- Natural resource conservation has greatly increased the carrying capacity of the Earth for humans.
- We have made unprecedented changes to ecosystems in recent decades to meet growing demands for food, fresh water, fiber, and energy.
- These changes have helped to improve the lives of billions, but at the same time they weakened nature’s ability to deliver key services such as purification of air and water, protection from disasters, and the provision of medicines.
- Humans have faced serious environmental impacts in the past and in most cases (though not all) human ingenuity saved the day.
- We now face environmental challenges on a global scale. We will need major innovations and fundamental changes in our approach to solve these challenges.

Course Objectives:

Upon completion of this course, the student should:

- Recognize that *everything is connected*. Resources are not separate entities, but communities of living, interacting organisms and their abiotic environments.
- Recognize that the history of resource management is one of turning an increasing amount of the world’s biomass into humans and the things humans want and need. This is having major impacts on other species.
- It is also a history of increasing domestication. We started with grass seeds and small livestock, then other plants, trees, and finally domesticated fish. Will anything truly wild be left in our food supply?
- Recognize our total dependence on natural resources and our own *personal* impacts on them.
- Recognize the complexity of our resource problems; that there are often no simple answers and that *all* decisions have consequences.

- Recognize the importance of our philosophy in determining both the types of environmental problems we are likely to confront and the types of solutions we are willing to consider.
- Consider both human needs and the needs of ecosystems.
- Be able to tolerate, and even appreciate, diverse and conflicting viewpoints.
- Recognize that few disciplines are more controversial than resource management—and few are more important to our survival and that of our planet.

Building a supportive learning community:

Creating and nurturing a strong, supportive learning community is the mutual responsibility of all course participants. Achieving this goal takes dedication from everyone in a face-to-face setting and is even more challenging in an online environment, but we can do it.

Each week we will read book chapters and articles, watch films and narrated screencasts of lectures to build a foundation of knowledge and consider competing perspectives. After reviewing these materials, we'll participate in activities that help us express our ideas and interpretations, and respond to feedback about our ideas from other community members.

In order to facilitate deep and meaningful intellectual interactions between community members, students are required not just to post their own reactions and responses to course material, but also to respond to each other. The Teaching Assistant and I will join in online discussions and will also provide feedback on writing, but we cannot do it alone. Students must also take an active role in order to ensure that the class functions as a strong learning community where people feel comfortable expressing themselves and can build on each other's ideas.

Readings and Required Text:

I will post several PDFs of articles on the website that will be required. There is also a text for the course.

For those of you on a tight budget, copies of the text will be on reserve in the Bioscience Library and an eBook is available online. You will also find the first 4 chapters of Chiras on Blackboard in case it takes time to get your copy of the text.

***Natural Resource Conservation: Management for a Sustainable Future*, 9th or 10th Edition by Daniel D. Chiras & John P. Reganold.**

This book provides vital background and supplementary information that we don't have time to cover in lecture: You can order a new or used hardcopy at <http://www.UAFText2U.com>

Here is a link to a cheaper version of Chiras on Amazon, and a link for students to sign up for a free six months of Amazon Prime (free 3-5 business day shipping). It should be noted that if your subscription to Prime has not been cancelled by the end of the six month period, you will be charged the yearly rate of \$39 - which is half that of the non-edu membership. Book: <http://amzn.com/0132251388> - \$35.59.

Amazon

Prime: http://www.amazon.com/gp/student/signup/info?ie=UTF8&refcust=5XKG22R4TR7TTEDSD5OOGSTS2Y&ref_type=generic

Take Notes

Research makes it clear that students who take notes do better in classes and again, are more likely to graduate. Note taking helps keep your mind from wandering; it helps you concentrate on the class—or the screencast of a lecture or a video. Even though this is online, it will help to take notes while you watch videos and lectures.

Email: always include a subject & your name

If you send an email to me or to the TA, please put **“NRM 101” as part of the subject line**. Then it really jumps out to me. Most faculty get over 40 messages/day. If you want to be sure we read your email, ALWAYS include a subject. Otherwise, it could be considered spam and deleted.

Blackboard

We use the online course center called “Blackboard” (I abbreviate it Bb) for many things in this class. It allows us to post copyrighted material (since only those with a password can access it), the gradebook is kept online, and you can access lecture notes, announcements, handouts, etc. It will also be the place to take quizzes and submit some assignments. Go to <http://classes.uaf.edu/> and log in using your UA username (eg. sktodd). Don’t know your user name? Go to: https://uaonline.alaska.edu/banprod/owa/bwgtk2gid.P_DisplayID_Request.

If you have any questions about email or Blackboard, contact the Computing Help Desk at helpdesk@alaska.edu.

Technical Requirements:

Students must have regular access to a computer and the Internet to access online materials in Blackboard. Students will be expected to download course materials as well as upload assignments, which requires reasonably fast internet. You should also know how to play audio and video files, use tools in Blackboard such as the Discussion Forums and Blogs, and use a word processor for writing assignments. I prefer Google Docs or Word files rather than PDFs. Students often submit their papers with the filename NRM 101. But when everyone does that, I cannot tell the difference. Please name your files with your Last name first, first initial and the name of the assignment. For example: FRANKLIN.B_almanac.

Academic Honesty:

As described by UAF, scholastic dishonesty constitutes a violation of the university rules and regulations and is punishable according to the procedures outlined by UAF. Scholastic dishonesty includes, but is not limited to, cheating on an exam, plagiarism, and collusion. Cheating includes providing answers to or taking answers from another student. Plagiarism includes use of another author’s words or arguments without attribution. Collusion includes unauthorized collaboration with another person in preparing written work for fulfillment of any course requirement. Scholastic dishonesty is punishable by removal from the course and a grade of “F.” For more information go to [Student Code of Conduct](#).

Notice of Nondiscrimination:

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/titleIXcompliance/nondiscrimination.

Support Services

Go to the Student Handbook for things like: academic advising, tutoring, library and academic support, disability services, computing and technology, veteran and military support, academic complaint and appeals, late withdrawals, “classroom” behavior expectations and more.

UAF eLearning Student Services helps students with registration and course schedules, provides information about lessons and student records, assists with the examination process, and answers general questions. Our Academic Advisor can help students communicate with instructors, locate helpful resources, and maximize their distance learning experience. Contact the UAF eLearning Student Services staff at 907.455.2060 or toll free 1.800.277.8060 or contact staff directly – for directory listing see: <http://elearning.uaf.edu/contact>

UAF Help Desk. Go to <http://www.alaska.edu/oit/> to see about current network outages and technology news. For technical questions, contact the Help Desk at:

- e-mail at helpdesk@alaska.edu

- phone: 450.8300 (in the Fairbanks area) or 1.800.478.8226 (outside of Fairbanks)

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Quizzes & Assignments

There is at least one quiz due by 11:59 pm almost every Monday!

NOTE: **You cannot pass this course without doing the quizzes.** In every field, the 101-level courses tend to be heavy on vocabulary. In this respect, 101 courses are like learning a new language; it's hard to discuss the complex concepts without being fluent in the "language" of a discipline. The quizzes help develop your fluency in the basic concepts of NRM that you will need for upper division courses.

There is a quiz on every lecture topic, such as agriculture, forestry, soils, fisheries, etc. You do not need to wait till the last minute; you can do the quiz as soon as you're done viewing the lecture. **You'll have two chances to get a perfect score on each quiz.**

I do not like being tough on deadlines, but if you get behind in this course, it's very difficult to catch up. I would rather be tough on deadlines than see people get hopelessly behind and not finish the course.

Quizzes & Assignments DISAPPEAR after the due date. I've found that this helps encourage people to get them in on time. If you absolutely cannot get one of these done before it disappears, write me an email with an explanation of why you were late and I will consider turning it back on for you.

Tests & Final Exam

There will be a Midterm and one comprehensive Final Exam. Each of these will include several true/false and multiple choice questions, as well as several short answer and essay questions. Dates for tests and the exam are given on the class schedule, on the link called Assignments and Due Dates.

Questions on Test Scores

If you feel there is a mistake in the grading of a test or assignment, it is important for you to point it out. Graders do make mistakes and it's also healthy to defend yourself and your ideas.

Write me an email explaining any concerns you have about how tests or any assignment has been graded.

No Early Final Exams

Early final exams are not allowed (an airline ticket is not an excuse for missing the final exam). However, if you have more than 2 exams in one day, provide proof and if possible, I will allow you to take the final exam at a different time.

Missed Test Policy

This policy is an effort to be fair to those who did take the test on time and who have complained in the past that they, too, would have liked extra time to study (or sleep, etc...).

Sports Teams. If you are on a team that requires you to miss a test, you must have an excuse signed by your coach and make arrangements with me to take the test as soon as you return.

Illness. if you are seriously sick, you should definitely stay home. You won't do well on the test and could infect others. However, please write me an email asap (preferably before the test) and arrange with me and a proctor to make it up as soon as possible.

Grading Policy

Zeros are very bad for your final grade! Try hard not to get a single ZERO! Those who flunk this course inevitably have several zeros on the grade sheet. This is NOT a difficult course—unless you fail to do the work. **It is always better to turn in something than take a zero.** Grades will be based on the percentage of points earned in the course. There may be some slight changes in the points on things, but it won't be by much.

ITEM	POINTS	% of total points
17 Quizzes varying from 30 to 148 points	1461	44%
Final Exam (500) and Midterm (300)	800	24%
7 Written Assignments	650	19%
5 Discussion Forums & an Introductory Blog	195	6%
Active Engagement in 3 Role Play Exercises	180	5%
Reflections on Role Play Exercises	66	2%
TOTAL	3352	100%

Plus and minus will be used as follows. Note that this course cannot count as a requirement if the student receives anything less than a C-.

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
100-93%	92-90	89-87	86-83	82-80	79-77	76-70	69-67	66-64	63-60	59-57	56 or less

Anyone who has less than 51% of the points possible after the 2nd test will be withdrawn from the course. It is better to receive a W than an F.

I will contact you if this is the case.

How to Check Your Grades

To check your grades for assignments/quizzes and find comments from your instructor, click on the My Grades link in the sidebar menu. All assignments and any due dates are listed. If your instructor has left overall assessment comments, Click on the speech bubble icon to view overall comments and feedback.

If the score is for a test or quiz, the title of the test is a link. Then click on the check mark or your score to see results and feedback.

If the score is for an assignment, the title of the assignment is a link and by clicking this link you'll be taken to your submission, grade and comments.

If you see a green exclamation point, your assignment has not been graded yet.

Expectation of Student Effort

Doing well in college courses requires more time than many students allow. Successful, timely completion of this course depends on committing yourself early and maintaining your effort.

Students should expect to spend a minimum of 9 hours per week on this class. Students are expected to complete the weekly assignments by their due dates. If circumstances arise that cause you to need extra time on any assignment(s), email me for guidance. Extensions of due dates may be granted, but unless it is an emergency where you could not contact me, I expect to be informed in advance if you are not able to submit

your assignment on time. Students are expected to maintain a working backup plan to be implemented in the event of a computer malfunction or an interruption of their normal Internet service during the course. If you are in Fairbanks, Rasmuson Library has computers available for checkout if your computer is temporarily out of service.

Student Protections and Services:

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veterans' services, rural student services, etc to find reasonable accommodations. Students at this university are protected against sexual harassment and discrimination (Title IX), and minors have additional protections.

All of us have strengths and weaknesses when it comes to learning. If you have a particular learning disability that may interfere with your ability to perform the work in this course, I am happy to make any necessary accommodations. It is the student's responsibility to obtain an Accommodation Letter from the Disabilities Office of the Health Center (ext.6158). No accommodations will be made until this letter is given to the professor. Accommodations will not be made retroactively (i.e. if you have a spelling disability, you must present the letter *before* any points are deducted for spelling). I will appreciate your cooperation in this.

For more information on your rights as a student and the resources available to you to resolve problems, please see the following Student Handbook <https://cms-test.alaska.edu/handbook/>