(9) Announcements Dashboard Correction to the correction Syllabus Posted on: That should have been Room A335 Aug 26, 2024, 2:53 PM **Assignments** Courses Kaltura: Media Gallery **Class Room Number** Posted on: Calendar All, The room number on the Canvas Site was not updated p... Modules Aug 26, 2024, 2:39 PM 144 **Pages** Inbox **R625 - Correction to instructions for PS1** People Posted on: Dear Class, I am looking forward to our first meeting tomorr... Aug 25, 2024, 10:48 PM Grades History 0 Quizzes Commons FA24: ENVIRONMENTAL ECONOMICS & Discussions Jump to Today **♦** Edit Chat POL: 35821 Kaltura: My **IU** Libraries Media Class Meetings: MW 3:00-4:15 PM Questionnaire Responses **TimelyCare** Location: SPEA A335 **Campus Course** ? Policies Kenneth Richards Help TA: Karenna Tankersley Library Research Office: SPEA Rm. 410 Guide TA email: ktankers@iu.edu Course assignments are not Telephone: 812-855-1461 weighted. NameCoach TA Office Hours: TBD Email: kenricha@indiana.edu Course Room: A220 Study Room Questionnaire Office Hours: Wednesday 1:00 - 2:30 Rubrics **New Analytics** Introduction Reports & **Dashboards** From Bill McKibben, "What Good is a Forest?", Audubon Magazine, May/June 1996: Top Hat "Let's assume, for the duration of this article, that to you trees are vertical stalks of fiber, that a forest carries no more spiritual or aesthetic value than a parking lot, that woodland creatures are uninteresting sacks of calories, IT Support 24/7 and that the smell of sunbaked pine needles on a breezy June afternoon merely matches the scent that comes **Files** Ø from those conifer-shaped air fresheners that dangle from your rearview mirror. Let's assume, in other words, that you've done something rotten and God has turned you into an economist." Ø Collaborations Welcome to Environmental Economics and Policy, R625. Ø Outcomes Where this Course Fits in your Training Care Referral This is a policy analysis course with a strong emphasis on the applied quantitative tools of the field. We will be **Campus Course** doing a great deal of problem solving, building from basic concepts to organize and execute solutions. There is a distinction in field of policy analysis that suggests that environmental policy is about what we put into the environment and natural resource policy is about what we take out. While it an artificial and potentially misleading distinction, it is also useful. For example, the models used in the two areas of analysis are different; we generally use static models to examine basic concepts in environmental policy and dynamic models for natural resource management. For that reason, in our school the topics were taught as two different courses: (1) Environmental Economics and Policy and (2) Natural Resources Management and Policy. Unfortunately, the focus of the natural resources course drifted over time to focus on the institutions that manage natural resources (e.g., Department of Interior and United States Forest Service) rather than the management of the natural resources themselves. In the process, the topic of bioeconomic modeling was dropped entirely. Students observed that it was possible to complete a concentration in Environmental and Natural Resources Policy and Management without any knowledge of trees, fish, energy, or water. To respond to changes in other courses, this course was adapted to include the bio-economic modelling of natural resources that was originally covered elsewhere. In this sense it is "improved." The logical consequence of this adjustment, however, is that we have cut some of the material from the course's former structure; specifically the course places less emphasis on the full range of policy instruments. To gain a deeper understanding of the range of tools the government uses to implement environmental policy, students are encouraged to take R564, Environmental and Natural Resources Policy Design and Implementation. Compared to other environmental and natural resources economics courses, SPEA's version also devotes less attention to cost-benefit analysis. That is because the school offers an outstanding course devoted to CBA (P541), where you will gain experience with those tools of the trade. Students are also encouraged to explore other dimensions of environmental and natural resources policy with such outstanding courses as R645 Environmental Law and R521 Domestic Environmental Policy. The latter course emphasizes the politics and institutions that both drive and constrain environmental policy. **Course Objectives** • To introduce the basic concepts of environmental and natural resources economics and policy. • To develop rigorous economic, analytical, and problem solving skills. • To explore how the key environmental and natural resources models can be applied in practice. • To examine how the generalizable principles hold true across many applications, as well as the exceptions to those broad principles. • To explore the differences between static and dynamic models that are used in environmental and natural resources modelling, respectively. • To prepare for the type of policy analysis required in both the government and private sectors. **Prerequisites** To succeed in this course you will need a strong understanding of basic microeconomic principles and facility with interpreting graphs, so V517 or its equivalent is a prerequisite for the course. Problem Set 1 is intended to help you determine whether you have the basic economics skills you will need to complete the course. You should have strong algebra skills, facility with simultaneous equations, and preferably the ability to do simple derivatives and integrals. Most importantly you will need tenacity in solving complex problems. Some class members may have gaps in their preparation for the course. If you are concerned about the quantitative elements of the course, please review Units 1 to 14 of the Math Preparation Program, with particular attention to Unit 12 on financial analysis. While calculus is not strictly required to complete the assignments in this course, it will make the work much easier. If you are not yet comfortable taking derivatives, I recommend that you also review Units 19 and 20. You will also find Units 22 and 23 on integration useful. **Student Responsibilities** • Attend class, read assignments, and participate in class discussions. • Complete the homework/problem set assignments and tests. • Participate actively and professionally in, and make serious contributions to, the class discussion and every group effort to which you are assigned. • Always make a copy of your assignment before handing it in. • Keep your email system operating so that you can be sure to receive class-related notes. • Include the course number, R625, in the subject line of every email related to the class. • Address all emails to both the professor and the class TA. **Readings and Materials** The course will rely upon a combination of a textbook and posted readings. Textbook: Kolstad. 2010. Environmental Economics. Second Edition. Oxford University Press. Additional readings, particularly in the area of natural resource modeling, will be posted to the class Canvas site. This is a graduate course. How much reading you do is largely up to you. The more of the materials you read, the more you will know. The more you discuss the ideas among yourselves, the more you will understand. I will be relying heavily on the class Canvas site to disseminate readings, class materials, lecture notes, and assignments. Please check there regularly for new and updated materials. If you contact me about the course, please be sure to always include the course number, R625, in the subject line. That is the only way I can be sure to find messages related to the course. **Course Grades and Assignment Schedule** I generally do not grade on a curve in this class. Instead, I give lots of assignments - many opportunities to earn points toward a final grade. There are a total of 116 points available, while only 93 are required for an A. The translation of numbers to grades will follow the standard format, with one exception. >110 - A+ 93 - 110 - A 90-92 - A-87-89 - B+ and so on... The assignment schedule and weighting is outlined in the table below. Assignment_ Date assigned Due Date **Points** Problem Set #1 August 26 August 31 3 Problem Set #2 September 11 October 5 12 Problem Set #3 October 7 October 19 13 In-class exam #1 October 21 October 21 15 15 October 21 November 2 Take-home exam #1 Problem Set #4 November 4 November 16 14 Problem Set #5 8 November 18 December 7 15 Take-home exam #2 December 9 December 14 In-class exam #2 15 December 9 December 9 Class participation NA NA 6 **Total Points** 116 As you can see, you could skip 10 percent of the assignments and still receive a very high grade in the class. I do not advise this approach, though the choice is yours. However, professionalism prohibits anything less then full effort on group assignments. **Turning in Assignments** The assignments will each clearly indicate their due date and time. You must retain copies of all of your assignments. We have had good luck with web-based approaches to turning in assignments. You can take a picture of your assignments or scan them in and upload the jpg or pdf via the class Canvas site. We will use the class Canvas site to manage submissions. Your grade on an assignment will be reduced by 5 percentage points for each day it is late. Once the answers for an assignment are discussed in class following the due date, or posted on the website, we will no longer accept a late submission. **Attendance** You are expected to attend all classes and participate in class. If you are unable to attend class, please notify me and the TA by e-mail ahead of time. If you miss class for any reason, you are responsible for working with your classmates to catch up on missed materials, acquiring notes and such. This means that even if you are not naturally inclined to do so, it is a good idea to be kind to your colleagues. I will also try to post videos of class discussions and a copy of the slides. **Cooperation on Assignments** In this class there are several avenues to learning - e.g., talking with other students, reading the assignments, working problems and, on rare occasions, even listening to the professor. You can not learn this material without working the problems. However, the problems can be very challenging and sometimes students need extra help, perhaps a bit of guidance. Therefore, we use a combination of group work, TA tutorials and office hours, and Professor's/TA's Lifeline to help us all learn together. At the same time, you eventually have to be able to demonstrate that you have mastered the material for yourself. Therefore, the level of cooperation will be different for different assignments. **Problem sets -Problem Set 1** is intended to help you gauge whether you are prepared for the class. Therefore, this assignment must be your own work. Problem Sets 2 to 4 are more advanced. We will assign you to small groups of three or four students to work on these problem sets. The group assignments will rotate so that you have a different group for each assignment. Everyone needs to contribute to the development of these assignments. One grade will be assigned to the entire group. **Problem Set 5** will be a strictly individual exercise. In-class and take-home exams - No cooperation whatsoever will be allowed. You will be asked to sign a statement indicating that you neither received nor provided any assistance on the exams. Note that about 65 percent of your grade is based on individual work and 35 percent on group exercises. On both problem sets and take-home exams you can also direct questions of clarification and even ask for hints at the Professor's/TA's Lifeline. You do this by submitting an email with a clearly stated and delineated question to the professor and TA. The question will be duplicated with your identity removed, answered, and returned to the class so everyone can benefit from the exchange. You may not ask questions about the assignments in person. However, you are always welcome to ask general questions about the concepts in the class and that is often what you really need to solve the problems. **Academic Misconduct** I will not tolerate academic misconduct. The Indiana University Code of Student Rights, Responsibilities and Conduct, Section II discusses student academic misconduct. You can find this information on the website at https://studentcode.iu.edu/responsibilities/academic-misconduct.html []. Any student found cheating, plagiarizing or otherwise engaging in academic dishonesty will receive a failing grade for the course and will be reported to the Dean of Students. Other sanctions are possible. I hate doing this and, I am happy to say, almost never have to with graduate students. **Student Recommendations** I am happy to write recommendations for our wonderful students. To provide a strong recommendation I need to be very familiar with the student's class work. To ensure that my recommendations will continue to provide results, I will generally only write recommendations for students who have completed at least two of my courses and have received a grade of "A" in both. In a few cases I will offer to write recommendations on the basis of progress in the second class. This, of course, does not apply to the dedicated souls who work with me on projects outside class (e.g., GAs, TAs, and RAs). **Class Schedule and Assignments** The class schedule should be considered flexible, subject to change as I learn more about your interests and the speed with which we can move through the material. Sometimes, I also have to make changes due to workrelated travel requirements. The following will help you plan your readings and schedule times for the assignments and exams, but should not be considered fixed. If you have academic or professional obligations this fall (e.g., academic programs, conference attendance) that will interfere in your completion of assignments, please let us know as soon as possible. Reading assignments should be completed before class on the day they are assigned. This schedule is subject to change and updating as the course progresses, based on class progress, interests, and the exigencies of faculty duties. **Section I: Introduction to Welfare Economics and Environmental Policy** August 26: **Topic 1: Basic Welfare Economics Topic 2: Introduction to Environmental Policy - A Piece** August 28: of Cake 5 Problem Set 1 is due Saturday, August 31st at 5:00 PM No class on Labor Day, September 2, 2024. **Topic 3: Efficiency and Markets: Why is there** September 4: **Government?** Reading: Kolstad 🕎 Chapter 4 🔱 and 🕎 Chapter 5 🔱 **Topic 4: Marginal Analysis: Damages and Abatement** September 9: **Costs Topic 4: Marginal Analysis: Summation of Supply and Demand Curves and Application** September 11: to Abatement Costs **Section II: Addressing Market Failure** Topic 5: Property Rights, Pigou and Coase September 16: Reading: Kolstad: Chapter 12 & 13 September 18: Topic 6: Public Goods Reading: Kolstad: Chapter 5 (again) Topic 7a: Regulation September 23: Reading: Kolstad: Chapter 11 September 25: Topic 7b: Emissions Fees and Marketable Allowances Reading: Kolstad: Chapter 9 & 12 (again) Note: You will work through the UNITAR program on you own. September 30: **Topic 8: Regulation under Uncertainty** Reading: Kolstad: Chapter 15 & 18 Problem Set 2 is due on Saturday, October 5th at 5:00 PM **Topic 9: Enforcement** October 2: Reading: Kolstad: Chapter 16 October 7: **Topic 10: Revisiting the Costs of Environmental Protection** Reading: Kolstad: Chapters 19 October 9: Topic 11a: Cost-Benefit Analysis: Revealed Preference Approaches Reading: Kolstad: Chapter 8 & 9 October 14: **Topic 11b: Cost-Benefit Analysis: Constructed Markets Topic 12: Politics and Environmental Policy: The Glass** October 16: that Covers the Cake Reading: Kolstad: Chapter 10 also read: Keohane, Nathaniel O., Richard L. Revesz, and Robert N. Stavins. "The Choice of Regulatory Instruments in Environmental Policy." Harv. Envtl. L. Rev. 22 (1998): 313. **⋒**_ Problem Set 3 is due on Friday, October 19th at 5:00 PM October 21: Catch up and applications In-Class Exam #1 - covering all material through Topic 12 including UNITAR course on October 23: carbon taxes Take home exam is assigned October 21st - due November 2nd. Section III: The Applications in Natural Resources Policy **Topic 13: Water and Land Value** October 28: <u>Use.</u>" Addison-Wesley. Chapter 3. ↓ (Note: the class will not meet this week; plan to review the desk lectures provided on the Topic 13 Page for the economics of water and land value.) **Topic 13: Water and Land Value** October 30: Take-home exam is due on Saturday, November 2nd at 5:00 PM **Topic 14: Fisheries and Fisheries Regulation** November 4: **Topic 14: Fisheries and Fisheries Regulation** November 6: November 11: **Topic 15: Nonrenewable Resources** Reading: Hartwick and Olewiler 🕎 Chapter 8 🕹 and 🕎 Chapter 9 🕹 **Topic 15: Nonrenewable Resources** November 13: Problem Set 4 is due Saturday, November 16th at 5:00 PM **Topic 16: Forest Resources** November 18: November 20: **Topic 16: Forest Resources** Class tool: Spreadsheet for Optimal Rotation with Quadratic Growth Function **Topic 16: Forest Resources** December 2: December 4: **Catch-up and applications** Problem Set 5 is due Saturday, December 7th at 5:00PM **In-Class Exam** December 9: Take Home Exam released (no class meeting) December 11: Take-home exam is due Saturday, December 14th at 5:00 PM Course Summary: **Details** Due Date Problem Set #1 due by 5pm Sat Aug 31, 2024 due by 5pm Sat Oct 5, 2024 Problem Set #2 Problem Set #3 due by 5pm Sat Oct 19, 2024 In-Class Quiz 1 Wed Oct 23, 2024 due by 4:15pm Take-home Exam #1 due by 5pm Sat Nov 2, 2024 Problem Set #4 due by 5pm Sat Nov 16, 2024 Problem Set #5 Sat Dec 7, 2024 due by 5pm due by 4:15pm Mon Dec 9, 2024 In-Class Quiz #2 Take-home Exam #2 due by 5pm Sat Dec 14, 2024 Participation \vdash

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