

**AGRICULTURAL ECONOMICS 445**  
**AGRICULTURAL AND NATURAL RESOURCE POLICY ANALYSIS**  
**Course Syllabus, Spring Semester 2020**

**I. Basic Information:** Classes meet Tuesdays and Thursdays, 11:00-12:15 in 148 Chase Hall. Instructor: Prof. Peterson, 207B Filley Hall (0922); [epeterson1@unl.edu](mailto:epeterson1@unl.edu)

**Note:** Students should not register for both this class and classes on City Campus that are scheduled to end at 10:45 or to begin at 12:30 as 15 minutes is not enough time for travel between the two campuses.

**Course Description:** The purpose of this course is to introduce students to the use of economic tools and concepts in the analysis and evaluation of public policies affecting agriculture, food, natural resources, and the environment. Emphasis is placed on social valuation, civic responsibility, ethics and the practical analysis of public policy issues. The course is divided into two parts:

Part I: *Basic Concepts and Theoretical Background for Policy Analysis*: the problem of collective action, basic economics of markets and human behavior, welfare economics, the role of the state, ethical and political dimensions of policy analysis.

Part II: *Economic Tools for Policy Analysis and Case Studies*: benefit-cost analysis, market models, welfare analysis, and partial and general equilibrium analysis. These analytical methods are illustrated with case studies in food, agricultural, natural resource, and environmental policies.

**II. ACE Learning Outcomes.**

This course is designed to provide an opportunity for students to satisfy one of the following ACE Learning Outcomes:

Learning Outcome 10: Generate a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation and reflection.

Learning Outcome 8: Explain ethical principles, civics, and stewardship, and their importance to society.

The course also reinforces Learning Outcome 1: Write texts in various forms, with an identified purpose, that respond to specific audience needs, incorporate research or existing knowledge, and use applicable documentation and appropriate conventions of format and structure; and Learning Outcome 3: Use mathematical, computational, statistical or formal reasoning (including reasoning based on principals of logic) to solve problems, draw inferences and determine reasonableness.

**III. Opportunities to achieve the Learning Outcomes.**

Students will achieve an understanding of ethics, civic responsibility and the importance of public deliberation and analysis for society through class discussions, readings, problem sets and research conducted as the basis for a major student project that will constitute the scholarly product for learning outcomes 8 and 10. Problem sets and the student project will require:

- the collection, interpretation and presentation of primary or secondary statistical data to reinforce Learning Outcome 3;
- written discussions of the implications of the research and analysis done for the problem sets and the student project to reinforce Learning Outcome 1;
- through classroom participation and outside research, integration of material learned in this course with the skills, general knowledge and specialized methods learned in other courses to compose professional reports that can be used to assess the accomplishment of Learning Outcomes 8 and 10.

#### **IV. Graded assignments and assessment.**

**Exams:** There will be a midterm and a final exam. The dates for these exams are indicated in the attached course outline. These dates will only be changed in truly exceptional circumstances and no make-up exams will be given. Exams will include problems and essay questions based on material covered in class and in the readings.

**Problem Sets:** Three problem sets are due in class on the dates indicated in the course outline. These exercises will be distributed at least one week before they are due and will not be accepted after the due-date. Students may work together on these assignments but they are to be written up individually in each student's own words. If the answers to the questions are worded identically on two homework sets, both students will receive zeros for the exercise.

**Ethics Roundtable and Class Policy Discussions.** At the end of the first part of the course, there will be a roundtable discussion of the ethical dimensions of a public policy issue selected by the class. Possible topics include using crispr to edit human genomes, labeling of foods containing GMOs, climate change, agricultural subsidies in the US or EU, water use in Nebraska, protecting the Salt Creek Tiger Beetle, sugar taxes to combat obesity, immigration or refugee policies or any other topic with an ethical dimension. Participation in the roundtable is required.

During the second part of the course, three classes will be organized around case study discussions of applications of the analytical methods developed. Students will have an opportunity to take a leadership role for these discussions. Additional background information may be distributed and students are encouraged to gather and share any relevant material that they may know about from other courses or that they discover through research or other means. Active participation in the discussions is required. The three class discussions are:

- Discussion of two examples of social benefit-cost analysis
- Discussion of two examples of partial equilibrium policy analysis
- Discussion of two examples of general equilibrium policy analysis

**Student Projects:** Analysis of a Public Policy Related to Agriculture, the Environment or Natural Resources. A full description of the requirements for these projects appears at the end of the syllabus. The specific topic for the project is left up to the student. After the midterm exam, the instructor will lead a discussion of writing, data handling and other issues related to the student projects. Students are expected to have identified a tentative topic at that time. The instructor is available at any time during the semester for consultations on appropriate topics. It is important that students begin thinking about their projects early in the term.

**Note on writing:** University graduates are expected to be able to write well-crafted analyses using correct grammar, syntax, word choice, spelling and so on. To encourage students to work

on their writing skills, both the writing and the content of work that is submitted will be evaluated and grade penalties may be assessed for writing errors. All written work will be checked for plagiarism and any evidence of plagiarism will result in a grade of zero on the exercise in question. Repeated or serious plagiarism may result in reduced final grades and a report to the office of student judicial affairs.

Exams, problem sets, and the student project will be evaluated for accuracy in solving problems and clarity of expression in interpreting results and drawing out implications for economic policy. Problem sets and the student project will also be assessed for the professionalism of the writing. Student projects may be entered into the Agricultural Economics Department and/or the ACE assessment databases. Problem sets and the student project are to be submitted in single word or word-compatible files (no pdf files and no extra Excel or other files) as attachments to an email to the instructor. Do not submit assignments through Canvas.

**V. Organization and grading procedures:** This course has been organized to meet the requirements for designation as an Agricultural Economics/Agribusiness/Natural Resource and Environmental Economics capstone and can be counted for either ACE Outcome 8 or 10.

**Class Attendance:** Students are expected to attend all class sessions. If it is necessary for a student to miss a class, she/he is still responsible for material covered during the missed class period. It is the student's responsibility to keep up with schedule changes.

**Reading and Homework Assignments:** The text for this course is *The Political Economy of Agricultural, Natural Resource and Environmental Policy Analysis* (referred to as "Policy Analysis"). The book chapters are posted on Canvas for your use. Additional reading assignments are indicated in the course outline and posted on Canvas. All reading assignments should be completed before the class for which they are assigned. The readings frequently provide greater depth than can be communicated during a class period and sometimes contain important information that cannot be covered in class. They may also serve as a source of exam questions. They are not, however, a substitute for attending class and participating in the class discussions.

**Tests and Grading Procedures:** There will be a midterm exam and a final on the dates listed in the course outline. Students are expected to participate in class discussions. Evidence of academic dishonesty (plagiarism, cheating) may result in a grade of "F" for the course. Because the final is comprehensive, a score of at least 50 percent on the final is required to pass the course. Students with grades of less than 50 percent on the final will fail the course. For students who obtain at least 50 percent on the final exam, grades will be based on the following:

Midterm Exam:	15%
Problem sets (2 at 9% each; third at 12%):	30%
Student Project:	25%
Final Exam:	<u>30%</u>
	100%

Students are expected to adhere to guidelines concerning academic dishonesty outlined in Section 4.2 of University's Student Code of Conduct (<http://stuaufs.unl.edu/ja/code/>). Students are encouraged to contact the instructor for clarification of these guidelines if they have questions or concerns. The Department of Agricultural Economics has a written policy defining academic dishonesty, the potential sanctions for incidents of academic dishonesty, and the appeal process for students facing potential sanctions. The Department also has a policy regarding potential appeals of final course grades. These policies are available for review on the department's website (<http://agecon.unl.edu/undergraduate>).

Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.

Emergency Response:

**Fire Alarm (or other evacuation):** In the event of a fire alarm: Gather belongings (Purse, keys, cellphone, N-Card, etc.) and use the nearest exit to leave the building. Do not use the elevators. After exiting notify emergency personnel of the location of persons unable to exit the building. Do not return to building unless told to do so by emergency personnel.

**Tornado Warning:** When sirens sound, move to the lowest interior area of building or designated shelter. Stay away from windows and stay near an inside wall when possible.

#### **Active Shooter**

- o **Evacuate:** if there is a safe escape path, leave belongings behind, keep hands visible and follow police officer instructions.
- o **Hide out:** If evacuation is impossible secure yourself in your space by turning out lights, closing blinds and barricading doors if possible.
- o **Take action:** As a last resort, and only when your life is in imminent danger, attempt to disrupt and/or incapacitate the active shooter.

**UNL Alert:** Notifications about serious incidents on campus are sent via text message, email, unl.edu website, and social media. For more information go to: <http://unlalert.unl.edu>.

Additional Emergency Procedures can be found here:

[http://emergency.unl.edu/doc/Emergency\\_Procedures\\_Quicklist.pdf](http://emergency.unl.edu/doc/Emergency_Procedures_Quicklist.pdf)

## COURSE OUTLINE

Jan. 14: Introduction.

*Part I: Basic Concepts and Theoretical Background for Policy Analysis.*

Jan. 16: The problem of collective action and public policy. Introduction to basic economic concepts. Read: Policy Analysis, Introduction to Part I and Chapter 1.

Jan. 21: Basic economic concepts. Policy Analysis, Chap. 2.

Jan. 23: Introduction to welfare economics. Policy Analysis, Chap. 3.

Jan. 28: The invisible hand. Continue reading Policy Analysis, Chapter 3.

Jan. 30: Fundamental theorems of Welfare Economics. Continue Policy Analysis, Chap. 3  
**FIRST PROBLEM SET DUE.**

Feb. 4: Market failures: imperfect competition and externalities. Policy Analysis, Chapter 4, first third.

Feb. 6: Market failures: common pool resources and public goods. Policy Analysis, Chapter 4, second third.

Feb. 11: The problem of income distribution and compensation. Policy Analysis, Chapter 4, last part.

Feb. 13: The origin and role of the state, government failure and rent-seeking. Policy Analysis, Chapter 5, first half.

Feb. 18: Politics and the problem of democracy. Policy Analysis, Chapter 5, second half.

Feb. 20: The economics of international relations. “Globalization and Agricultural Trade” by Anderson; “Trade Balances” by Peterson; AND “WTO Dispute Settlement and Food and Agricultural Trade” by Peterson.

**SECOND PROBLEM SET DUE.**

Feb. 25: Non-economic values in policy analysis: introduction to ethics. Policy Analysis, Chapter 6.

Feb. 27: Justice, fairness and equity in public choice. Continue reading Policy Analysis, Chapter 6.

Mar. 3: ***Roundtable discussion of a current ethical issue.***

Mar. 5: ***MIDTERM EXAM.***

Mar. 10: Review of exam results and discussion of writing, data handling, and other issues related to the student projects.

*Part II: Economic Tools for Policy Analysis.*

Mar. 12: Introduction to benefit-cost analysis. Policy Analysis, Part II Introduction, Chap. 7, first half.

Mar. 17: Measuring benefits and costs: shadow prices, discounting, and compensation. Policy Analysis, Chapter 7, second half.

Mar. 19: ***Class discussion of benefit-cost studies:*** “What do Economists Have to Say about the Clean Air Act 50 Years after the Establishment of the EPS?” by Currie and Walker, AND “The Benefits and Costs of Zero Tillage RD&E” by Awada et al.

Mar. 31: Introduction to partial equilibrium analysis.

Apr. 2: Graphical analysis of U.S. agricultural policies. Policy Analysis, Chapter 8, first half.

***THIRD PROBLEM SET DUE.***

Apr. 7: Log-linear models and welfare analysis. Policy Analysis, Chapter 8, second half.

Apr. 9: Summary of partial equilibrium modeling and welfare analytics of public policies in agriculture and natural resources. Policy Analysis, Chapter 8, Appendices.

Apr. 14: ***Class discussion of Partial Equilibrium Case Study:*** “Food Grain Policies in India and their Implications for Stocks and Fiscal Costs: A Dynamic Partial Equilibrium Analysis” By Kozicka et al. AND “Global Food Security in 2050: The Role of Agricultural Productivity and Climate Change” by Baldos and Hertel.

Apr. 16: Introduction to complex models. Policy Analysis, Chapter 9, first half and Appendix 9-1.

Apr. 21: General Equilibrium Analysis. Policy Analysis, Chapter 9, second half.

Apr. 23: Policy analysis and economic modeling.

***STUDENT PROJECT DUE.***

Apr. 28: ***Class discussion of CGE Case Study:*** “General Equilibrium Tragedy of the Commons” by Manning et al. AND “Economy-wide Impact of Maize Export Bans on Agricultural Growth and Household Welfare in Tanzania,” by Diao and Kennedy.

Apr. 30: Summary and review. Policy Analysis, Chapter 15.

***FINAL EXAM: May 5, 10:00 – 12:00***

## **STUDENT POLICY PROJECTS: Analysis of a public policy issue.**

Student projects will consist of a written report on research into a specific public policy or policy issue chosen by the student. You may select:

1. An existing policy such as the Conservation Reserve Program, the Trade Adjustment Assistance Act, the Endangered Species Act, Public Law 480, etc.
2. A potential policy change such as elimination of the U.S. cotton program, tradeable permits for underground water use in Nebraska, changes in immigration laws, etc.
3. A broad policy issue such as the idea of decoupling farm program payments, replacement of agricultural subsidies with income or disaster insurance, climate change mitigation, carbon sequestration, biofuels, nutrition, obesity, etc.

The topic for the student projects should be chosen relatively early in the term and in any case, no later than March 6 when the student projects will be discussed in class. Feel free to contact the instructor as you develop your topic to make sure it can be completed during the semester.

The reports should include a clear description of the policy or issue chosen and sufficient background to make it clear what the nature of the issue is (a 'problem statement'), what existing policies are supposed to accomplish, how they are supposed to accomplish these goals, and how well the policies have worked in the past if that is relevant. The overall goal is to evaluate the social benefits and costs of existing policies or policies that have been proposed to solve a particular problem. It will not be necessary to build a model to carry out this analysis. Using concepts developed in the course, you should work to identify the impacts of existing or potential policies on economic variables (prices and quantities) and on those who will gain or lose from proposed policies or policy changes. In some cases, it may be possible to find more technical analyses of your problem that are based on economic or statistical models and you are free to draw on these results for your analysis (with appropriate citation and documentation).

The papers should be 8-10 pages long excluding references, statistical appendices or other supporting material. The goal is to write a report that meets professional standards. It is expected that you will include statistical data to support your analysis. Grades will be based on how well you use concepts covered in the course as well as your general understanding of the economics, politics, and ethics related to your topic. You should pay particular attention to the distributive impacts and other ethical considerations as well as any global dimensions that may have a bearing on your analysis. Papers that do not include ethical analysis and/or interpretation of statistical data will be docked at least one letter grade.

The papers will be evaluated in relation to the scoring guide (rubric) posted on Canvas which identifies three broad learning outcomes: technical competence in economic and business concepts and quantitative analysis; global awareness and considerations of diversity; ability to communicate in writing at a professional level. All references must be cited and listed at the end in a bibliography. Any information obtained through the internet must be fully documented. It is plagiarism to copy a phrase, sentence, several sentences, a paragraph, etc. written by someone else without enclosing the words that are copied in quotation marks and providing information on the source of the passage. It is plagiarism to follow a particular text closely, changing a few words here and there or altering the order in which the phrases or sentences appear. It is plagiarism to take information from a source (even if the words are not copied word for word) without indicating the source of the information. Full and complete documentation and correct use of quotation marks and citations are mandatory for this exercise.