

## AREC 572: Social Benefit-Cost Analysis

Colorado State University

Spring 2020

Dr. Andy Seidl, professor

TTh 3:30-4:45 pm, C360 Clark Bldg

**Office:** B309 Clark Building. T: 970-491-7071. E: [Andrew.Seidl@colostate.edu](mailto:Andrew.Seidl@colostate.edu).

**Office hours:** Typically, I am available TWTh 2 -3:00 pm. Appointments are also welcome.

### Description:

- Theory, application of concepts relating to social benefit cost analysis of public projects, policies intended to promote social welfare, economic growth.
- Apply analytical techniques to compare the economic and/or financial benefits, costs, and distributional implications of choices, particularly surrounding economic development public and private sector projects, investments and policies.
- Understand approaches, adaptations, caveats and limitations to the use of SBCA to evaluate the implications for developed as well as developing countries and communities.

**Objectives:** The successful student will be able to...

- Apply benefit cost analysis techniques to projects and policies and evaluate their implications for business, developed and developing countries and communities.
- Assess the strengths and weaknesses of economic valuation approaches to inform decision-making.

**Grading:** The class will be graded in the following manner:

A = >90%      B = >80%      C = >70%      D = >60%      F = <60% (+/- will be assigned at my discretion)

### Evaluation:

Exam I	26% of total points
Exam II	30% of total points
Exam III	20% of total points
Homework	24% of total points

### Exams (76% of total grade):

Exams questions will be short answer, and graphical or mathematical illustrations. Information will be taken from the text and from classroom discussion.

### Homework (24% of total grade):

Graphical and/or mathematical illustrations of the core themes covered in the course from the text and using real situations found in newspapers, magazines, journal articles and/or agency or business reports. (6% each)

**Text:** Boardman, A., Greenberg, D.H., Vining, A.R., and D.L. Weimer. 2018. Cost-benefit analysis: Concepts and practice, 5<sup>th</sup> edition. Cambridge University Press. ISBN-13: 978-1108401296 ISBN-10: 1108401295.

### Optional (supplemental) resources:

AAEA. 2019. [AAEA review finds that USDA benefit-cost analysis underestimates the true cost of relocating researchers to Kansas City](#). June 19, 2019.

Hanley, N. and E. Barbier. 2009. Pricing Nature: Cost-benefit analysis and environmental policy. Edward Elgar. 353 pages.

Nardinelli, C. 2018. [Some pitfalls of practical benefit-cost analysis](#). J. Benefit Cost Analysis. 2018, 1-12. Doi: 10.1017/bca.2018.18

USDA. 2019. [Cost-benefit analysis—Trade mitigation program](#). June 20, 2019.

**Schedule (subject to adjustment according to class needs):**

**Module 1:**

**Essentials of SBCA**

1/21/2020 Overview of the course. Chapter 1: Introduction to Cost-Benefit Analysis  
1/23/2020 Chapter 1 continued  
1/28/2020 Chapter 2: Conceptual foundations of cost-benefit analysis  
1/30/2020 Chapter 3: Microeconomic foundations of Cost-Benefit Analysis  
2/4/2020 Chapter 3 continued  
2/6/2020 Chapter 4: Valuing impacts from observed behavior: Direct estimation of demand

**2/7/2020 Homework #1: Due 5 pm**

2/11/2020 Chapter 4 continued.  
2/13/2020 Chapter 5: Valuing impacts in output markets  
2/18/2020 Chapter 6: Valuing impacts in input markets  
2/20/2020 Chapter 7: Valuing impacts in secondary markets

**2/25/2020 Examination #1: 26% of the course grade**

*(Supplementary material for Module 1: Hanley and Barbier chapters 2, 5, 6)*

**Module 2:**

**Dealing with prediction, time, risk, and uncertainty.**

2/27/2020 Chapter 8: Predicting and monetizing impacts  
3/3/2020 Chapter 9: Discounting future impacts and handling inflation  
3/5/2020 Chapter 9 continued  
3/10/2020 Chapter 10: The Social Discount Rate  
3/12/2020 Chapter 11: Dealing with uncertainty: Expected values, sensitivity analysis & information

**3/13/2020 Homework #2: Due 5 pm**

**3/16-20/2020 Spring Break**

3/24/2020 Chapter 12: Risk, option price and option value  
3/26/2020 Chapter 13: Existence value  
3/31/2020 Chapter 14: Valuing impacts from observed behavior: Experiments  
4/2/2020 Chapter 15: Valuing impacts from observed behavior: Indirect market methods

**4/3/2020 Homework #3: Due 5 pm**

4/7/2020 Chapter 15 continued  
4/9/2020 Chapter 16: Contingent valuation: Using surveys to elicit information

**4/14/2020 Examination #2: 30% of the course grade**

**(4/16/2020) No class**

*(Supplementary material for Module 2: Hanley and Barbier chapters 3, 4, 7, 9, 11)*

**Module 3:**

**Valuation techniques and adaptations to SCBA**

4/21/2020 Chapter 17: Shadow prices from secondary sources.  
4/23/2020 Chapter 18: Cost-effectiveness analysis and cost-utility analysis  
4/28/2020 Chapter 18 continued  
4/30/2020 Chapter 19: Distributionally weighted CBA.

**5/1/2020 Homework #4: Due 5 pm**

5/5/2020 Chapter 20: How accurate is CBA?  
5/7/2020 Course summary, lessons learnt and evaluation

**5/11/2020 Final examination: 20% of the course grade, 9:40-11:40 am**

*(Supplemental material for Module 3: Hanley and Barbier chapters 8 and 13; Nardinelli, 2018; AAEA, 2019; USDA, 2019)*

## **Academic Integrity Policy**

This course will adhere to the CSU Academic Integrity Policies and Guiding Principles as found in the General Catalog and the Student Conduct Code.

In this course, at a minimum, violations will result in a grade of zero for the work in question and a report to the Office of Conflict Resolution and Student Conduct Services.

## **CSU Honor Pledge**

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course. While you will not be required to affirm the honor pledge, you will be asked to affirm the following statement at the start of your exams: "I have not given, received, or used any unauthorized assistance." Further information about Academic Integrity is available at CSU's Practicing Academic Integrity.

## **Principles of Community**

The Principles of Community support the Colorado State University mission and vision of access, research, teaching, service and engagement. A collaborative, and vibrant community is a foundation for learning, critical inquiry, and discovery. Therefore, each member of the CSU community has a responsibility to uphold these principles when engaging with one another and acting on behalf of the University.

Inclusion:

- We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents, and contributions.

Integrity:

- We are accountable for our actions and will act ethically and honestly in all our interactions.

Respect:

- We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

Service:

- We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

Social Justice:

- We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

## **Mental Health:**

Need Help?

CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970.491.6053 or go to <http://health.colostate.edu>. If you are concerned about a friend or peer, tell someone at by calling 970.491.1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (<http://supportandsafety.colostate.edu/tellsomeone>). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.

## **Sexual Assault and Violence Elimination**

CSU's Student Sexual Harassment and Violence policy, following national guidance from the Office of Civil Rights, requires that professors follow CSU policy as a "mandatory reporter" of any personal disclosure of sexual harassment, abuse, and/or violence related experiences or incidents shared with the professor in person, via email, and/or in classroom papers or homework exercises. These disclosures include but are not limited to reports of personal relational abuse, relational/domestic violence, and stalking. While professors are often able to help students locate appropriate channels of assistance on campus (e.g., see the CSU Health Network link below), disclosure by the student to the professor requires

that the professor inform appropriate CSU channels to help ensure that the student's safety and welfare is being addressed, even if the student requests that the disclosure not be shared.

For counseling support and assistance, please see The CSU HEALTH NETWORK, which includes a variety of counseling services that can be accessed at: <http://www.health.colostate.edu/>. And, The Sexual Assault Victim Assistance Team is a confidential resource for students that does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. The web address is <http://www.wgac.colostate.edu/need-help-support> .

**Resources for Disabled Students.**

If you will need accommodations in this class due to a disability or chronic health condition, please make an appointment with me to discuss your individual needs. Any accommodation must be discussed in a timely manner prior to implementation. A verifying accommodation letter from Resources for Disabled Students is required before any accommodation is provided. Student Disability Center <https://disabilitycenter.colostate.edu/> located in TILT, room 121 or via phone 970-491-6385.