**SPEA-401 Financial and Cost & Benefit Analysis**

**Required Texts**

* No required textbook. All readings will be available electronically through Canvas. All readings will have a URL link or a link to a PDF file for you to access the reading directly. If any link does not work properly, please let me know by email immediately.

**Course Description**

This course familiarizes students with the principles of financial analysis, cost-benefit analysis, and Kaldor/Hicks accounting. Topics include net present value calculation; net annual worth; public and private decision criteria; and market data adjustment for taxes, rents, and other market distortions.

Additional Details:

This is an advanced undergraduate course in policy analysis in which you will extend your existing knowledge and skills in the areas of financial analysis and microeconomics and apply them to evaluate the wisdom of undertaking complex private and public projects. We will begin by reviewing and applying financial analysis techniques, including discounting, accounting for inflation, calculating net present value, etc. These tools will be used throughout the course in comparing and analyzing different projects and are useful for your own personal financial decisions. We will then extend these techniques to the arena of public sector project evaluation using Cost Benefit Analysis. To do so, we will review some basic microeconomics and welfare economics that provide the foundation for cost-benefit analysis. We will then cover how this theory can be applied to calculate costs and benefits in practice. At the completion of this course, you will have the skills to conduct analyses of both public and private projects in a rigorous manner.

**Learning Outcomes**

**Learning Outcomes:**

By the end of this course, you will be able to:

1. Compute net present values of future cash flows
2. Conduct sensitivity analysis to understand the role of uncertainty
3. Analyze public projects with the tools of microeconomics
4. Understand tools for quantifying monetary and non-monetary costs and benefits
5. Recommend policies based on objective analysis

**Course Requirements, Assignments, and Grades**

**Course Format**

This course will consist of a mixture of lectures, discussions, in-class activities, problem sets, case studies, and exams. I also strongly encourage questions and participation during lectures.

For a few sessions, starting in Week 2, we will be working on investment analysis. These class periods will be a combination of lectures and hands-on work in Excel. Please bring a laptop with Microsoft Excel to class for these class periods. You may work with a partner if you would like to coordinate bringing one laptop for your pair.

In the middle of the semester, we will spend a few weeks reviewing concepts from microeconomics and relating them to cost-benefit analysis. This section of the class will not have slides and will involve a fair amount of drawing graphs on the board/in your notes with pen and paper. Laptops and electronic devices other than calculators will not be allowed during this section of the class.

For class periods that will use PowerPoint slides, I will post the slides in advance; however, be aware that the slides will only be a sketch of the in-class discussions. I ***highly*** recommend you print and bring them to class and take additional notes directly on the slides or in a separate notebook.

**Attendance, Class Participation, and Class Preparation**

**Attendance and active participation in class is expected whenever possible.** The ability to engage and participate is the biggest value added to in-person classes. **However, If you have a positive COVID-19 test or have COVID-like symptoms, please do not come to class.** If you miss class due to illness or for another reason, please touch base with a classmate for class notes. As described below, the slides on their own are an incomplete record of class material, and not all sessions will have slides.

***Class Participation Grading:*** Active engagement and participation in class is crucial to learning. It also makes the class more interesting. Our class sessions will be a mixture of "lecture" material and both small and large group discussions. To this end, you will be held accountable for class participation (keeping in mind that there may be times during the semester you are unable to attend class). During many classes, you will respond to a prompt in Canvas related to activities we are doing in class. While the assignment will be submitted through Canvas, you will not know the question unless you are present in class. The assignment will then be closed to any additional submission at the end of class. In other words, these assignments cannot be made up if you are not in class. **That being said, you may miss up to three of these assignments with no penalty, no questions asked. You are both strongly encouraged to save these free points for when you are actually unable to come to class due to illness and strongly encouraged to make use of these free points when you are, in fact, ill.**

***Class Preparation: Readings Quizzes:*** Many weeks will include an article describing an aspect of Cost Benefit Analysis or presenting an example of a Cost Benefit Analysis. These will be followed by a short readings quiz on Canvas that must be completed prior to class that week. We will usually discuss how these readings relate to class concepts, so having read them in advance is important to class preparation.

***Missing Exams Due to Illness:***We will have two exams this semester. If you must miss an exam due to illness, you will be required to submit a form to me that attests that you have a medical-related reason for missing the exam and attest that you know submitting false information to a faculty member is academic misconduct.

**Grading**

Grades will be assigned based on the activities assigned above and according to the following set of weights:

|  |  |
| --- | --- |
| **Assignment** | **Weight** |
| Class Participation | 10% |
| Reading Quizzes | 10% |
| Assignments (6 throughout the semester) | 50% |
| Exams (2 throughout the semester) | 30% |

**Additional Course Policies**

**Do not come to class if you feel sick or have tested positive for COVID-19.**

As of the start of the semester, IU policy states: "Stay home if you do not feel well. Even if you test negative for COVID-19 but have symptoms or feel unwell, you should continue to stay at home and away from others until you feel better and your symptoms have improved. Remember that you can be reinfected with COVID-19 even after recently being positive. So, even if you had COVID-19 recently but have symptoms, you should test for the virus."

If you test positive for COVID-19, as of the start of the semester, IU guidelines state: "IU continues to follow Centers for Disease Control and Prevention guidelines when it comes to isolation. Anyone who tests positive for COVID-19 must isolate away from others for five days (day 0 is the day of the positive test or when symptoms began). As long as the individual has been fever-free for 24 hours and symptoms have improved or subsided, on day 6, they may go back to their normal routine while masking around others. Individuals should wear a mask until they test negative on two antigen tests 48 hours apart or on day 10 following exposure."

[More details about IU policies](https://today.iu.edu/live/news/1985-covid-19-health-and-safety-what-you-need-to-know)

### Resubmission Policy and Answer key penalty

You can resubmit assignments to improve your grade, but there are a few things to keep in mind:

Steps:

1. Receive your grade: Wait for the TA to post your initial grade for the assignment.
2. Revise your work: Carefully review the feedback and make corrections or improvements.
3. Request regrading: Send me an email to let me know you've resubmitted your assignment, and I'll inform the TA.
4. Deadlines:
   * Resubmissions must be received before the midterm exam (for Assignments 1-3) or the final exam (for Assignments 4-6).
   * **Answer key penalty**: Any resubmission after I publish the answer key will be capped at 50% of the possible points you missed.

Example:

Let's say Assignment 1 is due on September 15th. You receive a grade of 20/30 on September 20th. I publish the answer key on October 13th, and the midterm exam is on October 17th.

* Scenario 1: If you resubmit between September 20th and October 13th, you can potentially earn back all the points you missed.
* Scenario 2: If you resubmit before the midterm (October 17th) but after the answer key is published (October 13th), you can earn back a maximum of half of the missing points (in this case, a maximum of 5 points, bringing your total to 25/30).
* Scenario 3: Any resubmission after the midterm exam is not accepted.

Important Note: These are general guidelines. I reserve the right to modify the resubmission policy if needed.

### Late Submission Policy

Late assignments (quizzes/problem sets) will not be accepted unless you encounter an issue such as an accident or medical emergency. In that case, you will need to provide documentation and bring it to my office to apply for an extension. However, any late submissions must be completed before the final exam schedule, which is a firm deadline that you are already aware of.

This strict policy is in place to maintain logical consistency and fairness:

1. The purpose of deadlines is to ensure that assignments help you stay on track with the course content and prevent you from falling too far behind.

2. Allowing students to have different deadlines, regardless of the reason, could lead to unfairness—such as hearing about the assignment through discussions with classmates or having extra time to prepare. Therefore, if you need an extension due to personal issues, you must complete the assignment in my office, which I believe will help minimize concerns about unfairness.

To further address any concerns about fairness, I will apply a grade deduction for late quizzes or problem sets. This deduction will be capped at 50%:

- 1–7 days late: -10% of the total points available  
- 8–14 days late: -20% of the total points available  
- 15–21 days late: -30% of the total points available  
- 22–28 days late: -40% of the total points available  
- More than 28 days late: -50% of the total points available.

Combining Late Submission with Answer Key Penalty:

* If you submit an assignment late and after the answer key is published, both penalties apply.
  + For example, if Assignment 1 is due September 15th, the answer key is published October 13th, and you submit it on October 15th (after the answer key is published):
    - A 50% penalty applies because it's after the answer key release.
    - A 50% penalty applies for being more than 28 days late.
    - If your original grade was 30 points, your final grade would be 30 \* 0.5 \* 0.5 = 7.5 points.

Late Submissions After Midterm/Final:

* You can still submit late assignments after the midterm (for Assignments 1-3) or final exam (for Assignments 4-6).
* However, you will not be able to **resubmit** these assignments for a higher grade.

Important Notes:

* Resubmissions must follow the deadlines outlined in the resubmission policy.
* These are general guidelines. I reserve the right to modify this policy if needed.

**Use of AI (such as ChatGPT) in this class.**

Using AI (such as ChatGPT) to assist in completing assignments will be allowed in the following ways:

* *List acceptable uses here, e.g. “In Assignment x, will be using and citing ChatGPT as part of the assignment.”*

If you use AI in an unauthorized manner, you will be committing plagiarism\* and will be subject to penalties in this class and sanctions by Indiana University.

**\*Plagiarism**: Plagiarism is defined as presenting someone else’s work, including the work of other students, as one’s own. *Any ideas or materials taken from another source* for either written or oral use *must be fully acknowledged*, unless the information is common knowledge. What is considered “common knowledge” may differ from course to course. <https://studentcode.iu.edu/responsibilities/academic-misconduct.html>.

**Late Withdrawal**

The auto-W deadline is NO LONGER THE LAST DAY OF CLASS (as it was during and post-Covid).  After the auto-W deadline, withdrawal will be significantly limited and you will need permission to withdraw and must meet requirements established by O’Neill.

**Additional Ground Rules**

As everyone is very well aware, we are (still) in the middle of a *global pandemic*. Everyone will experience ups and downs this semester. If you tell me you’re having trouble, I will not judge you or think less of you. I hope that you’ll extend me the same courtesy. So, I want everyone to be aware of some important ground rules:

* You *never* owe me personal information about your health (mental or physical), or anything else
* However, you are *always welcome* to talk to me about things that you are going through
* If I can’t help you, I will do my best to direct you to someone who can
* If you need extra help with classwork or you need more time with something, just ask. I cannot promise that I will always grant an extension, but I do promise to work with you within reason. However, I ask that, if at all possible, you notify me before something is due.

**Suggestions for How to Succeed in This Course**

**Note Taking and Read News**

* I will provide power point slides associated with some class meetings. However, these slides will only be a sketch/outline of the lecture and do not stand alone as full course notes. We will also have some sessions with no slides. Taking your own notes is crucial to success in the class.
* Many things happen every day, and I will sometimes share/retweet some perspectives on the news from the content we learn from CBA on my Twitter (@econ\_anniehsu) which might be a good source for you to cultivate your views on different things.

**Be an Active Participant**

You will find the class more interesting and learn better if you are an active participant.

**Join Office Hours**

Please don't be shy to talk with me during office hours. Some potential reasons to come to office hours:

* Ask a question about something we discussed in class
* Ask a question about course policies or structure (please check the syllabus first, but then feel free to clarify with me)
* Discuss something you read in the news that relates to CBA
* Discuss your post-graduation/career goals
* Anything else you'd like to talk about!
* Need a recommendation letter to apply for graduate school

**Course Schedule**

All course-related dates can be found on Canvas through the Modules. The schedule is tentative, and the exams will cover the materials we have, excluding those we don't have, don't panic!

**Full Course Schedule (Tentative)**

|  |  |
| --- | --- |
| **Week** | **Topic** |
| 1 | Introduction Basics of CBA |
| 2 | Investment Analysis and Finance Formulas |
| 3 | Applications of Finance Formulas |
| 4 | Shorter Compounding Periods, Project Lifecycles, and Inflation |
| 5 | Alternative Investment Criteria, Choice of Rate, and Sensitivity Analysis |
| 6 | -Steps in Cost-Benefit Analysis, Kaldor-Hicks Accounting -Willingness to Pay and Consumer Demand |
| 7 | -Marginal Cost and Firm Supply and Equilibrium -Cataloging Inputs and Outputs |
| 8 | Wednesday: Midterm exam review |
| 9 | Monday: In-Class Office Hours  **Wednesday:** **Midterm exam** |
| 10 | Spring Break |
| 11 | Distorted Markets: Taxes, Subsidies, and Externalities  Valuing Costs in Undistorted and Distorted Primary Markets |
| 12 | -Valuing Costs: In-Class Case Study  -Valuing Benefits Using Revenue |
| 13 | Contingent Valuation |
| 14 | Demand Curves, Indirect Market Methods, Valuing Life and Time |
| 15 | Benefits and Costs in Secondary Markets |
| 16 | Monday: Final exam review  Wednesday: In-Class Office Hours |
| 17 | **Monday: Final Exam 12:40 PM** |

**O'Neill School Expectations of Civility and Professional Conduct**

The O’Neill School takes matters of honesty and integrity seriously because O’Neill is the training ground for future leaders in government, civic organizations, health organizations, and other institutions charged with providing resources for the public and for members of society who are vulnerable and who are lacking in power and status. Precisely because O’Neill graduates tend to rise to positions of power and responsibility, it is critical that the lessons of honesty and integrity are learned early.

O’Neill requires that all members of its community – students, faculty, and staff – treat others with an attitude of mutual respect both in the classroom and during all academic and non-academic activities outside the classroom. A student is expected to show respect through behavior that promotes conditions in which all students can learn without interruption or distraction. These behaviors foster an appropriate atmosphere inside and outside the classroom:

* Students are expected to attend class regularly and to be prepared for class.
* Students must be punctual in their arrival to class and be present and attentive for the duration of the class. Eating, sleeping, reading the newspaper, doing work for another class, wandering in and out of the classroom, and packing up or leaving class early are not civil or professional behaviors.
* Students must abide by the course policy regarding the use of electronic devices in the classroom.
* Students must responsibly participate in class activities and during team meetings.
* Students must address faculty members, other students, and others appropriately and with respect, whether in person, in writing, or in electronic communications.
* Students must show tolerance and respect for diverse nationalities, religions, races, sexual orientations, and physical abilities.
* Students must not destroy or deface classroom property or leave litter in the classroom.

\*\* These expectations are excerpted from the O’Neill School Honor Code, which can be found at: <https://oneill.indiana.edu/doc/undergraduate/ugrd_student_honorcode.pdf>

**Academic Integrity**

**Online Course Materials**

The faculty member teaching this course holds the exclusive right to distribute, modify, post, and reproduce course materials, including all written materials, study guides, lectures, assignments, exercises, and exams. While you are permitted to take notes on the online materials and lectures posted for this course for your personal use, you are not permitted to re-post in another forum, distribute, or reproduce content from this course without the express written permission of the faculty member. Any violation of this course rule will be reported to the appropriate university offices and officials, including to the Dean of Students as academic misconduct.

**Note Selling**

Several commercial services have approached students regarding selling class notes/study guides to their classmates. Selling the instructor’s notes/study guides in this course is not permitted. Violations of this policy will be reported to the Dean of Students as academic misconduct (violation of course rules). Sanctions for academic misconduct may include a failing grade on the assignment for which the notes/study guides are being sold, a reduction in your final course grade, or a failing grade in the course, among other possibilities. Additionally, you should know that selling a faculty member’s notes/study guides individually or on behalf of one of these services using IU email or via Canvas may also constitute a violation of IU information technology and IU intellectual property policies; additional consequences may result.

**Plagiarism and Academic Dishonesty**

Absolute integrity is expected of every IU student in all academic undertakings. Integrity entails a firm adherence to a set of values, and the values most essential to an academic community are grounded on the concept of honesty with respect to the intellectual efforts of oneself and others. Academic integrity is expected not only in formal coursework situations but in all University relationships and interactions connected to the educational process, including the use of University resources. A student's submission of work for academic credit indicates that the work is the student's own. All outside assistance should be acknowledged, and the student's academic position should be truthfully reported at all times. In addition, students have a right to expect academic integrity from each of their peers. For further information regarding the Code of Academic Integrity, see: <http://www.iu.edu/~code/>

**Additional Information**

1. Counseling and Psychological Services For information about services offered to students by CAPS: <http://healthcenter.indiana.edu/counseling/index.shtml>

**TimelyCare**

Indiana students have free, 24/7 access to virtual mental health care services with TimelyCare. Students do not need insurance to access TimelyCare services. <https://www.iu.edu/mental-health/find-resources/timely-care.html#0>

1. Disability Services for Students Securing accommodations for a student with disabilities is a responsibility shared by the student, the instructor, and the DSS Office. For information about support services or accommodations available to students with disabilities and for the procedures to be followed by students and instructors: <https://studentaffairs.indiana.edu/student-support/disability-services/index.html>
2. Religious Observation In accordance with the Office of the Dean of Faculties, any student who wishes to receive an excused absence from class must submit a request form available from the Dean of Faculties for each day to be absent.  This form must be presented to the course instructor by the end of the second week of this semester.  A separate form must be submitted for each day.  The instructor will fill in the bottom section of the form and then return the original to the student.  Information about the policy on religious observation can be found at the following website: <https://policies.iu.edu/policies/aca-59-accommodation-religious-observances/index.html>
3. Sexual Harassment. As your instructor, one of my responsibilities is to help create a safe learning environment on our campus. Title IX and our own Sexual Misconduct policy prohibit sexual misconduct. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to talk to someone confidentially, you can make an appointment with:

1. The Sexual Assault Crisis Service (SACS) at 812-855-8900
2. Counseling and Psychological Services (CAPS) at 812-855-5711
3. Confidential Victim Advocates (CVA) at 812-856-2469
4. IU Health Center at 812-855-4011

For more information about available resources:  <http://stopsexualviolence.iu.edu/help/index.html>. It is also important to know that federal regulations and University policy require me to promptly convey any information about potential sexual misconduct known to me to our campus’ Deputy Title IX Coordinator or IU’s Title IX Coordinator.  In that event, they will work with a small number of others on campus to ensure that appropriate measures are taken, and resources are made available to the student who may have been harmed.  Protecting a student’s privacy is of utmost concern, and all involved will only share information with those that need to know to ensure the University can respond and assist.  I encourage you to visit <http://stopsexualviolence.iu.edu/help/index.html> to learn more.