O'Neill
Lead for the Greater Good

O'Neill School of Public and Environmental Affairs

V548: EVIDENCE-BASED DECISION-MAKING
Fall 2024

Dr. Jennifer Silva, Associate Professor
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TA: Zaw Naing, zynaing@iu.edu

Monday/Wednesday 3:00 PM – 4:15 PM
SPEA A 223

Office Hours: Monday and Wednesday, 12:00 PM – 1:00 PM
Office: SPEA 351

This course is designed to teach students about and provide them with practice with gathering information and evidence, and presenting the evidence compellingly and ethically in a way that informs decision-making.

By the end of the semester students will be able to use data and other information to present a complex issue or problem and communicate findings to a wider audience, with a focus on informing decision-making.

Content Areas
1. Research design
2. Data Wrangling (obtain, trust, clean, combine, etc.)
3. Analysis
4. Communication of findings

Learning Objectives
- Conduct research for a specific purpose;
- Describe what constitutes credible evidence in support of a management decision or policy argument;
- Identify appropriate resources available (at IU, online, etc.) to aid in research;
- Describe the data environment;
- Assess the quality of a data source;

- Identify appropriate technology for analytical tasks;
- Discuss ethical considerations pertaining to the analysis performed;
- Effectively/professionally communicate findings to experts and non-experts, the general public, and policy-makers using appropriate models of written and spoken research communication, and using effective data and conceptual visualizations.

Learning outcomes will be assessed by a student's participation and comments in class, written and presented work, the case competition, and the final discussion post.

Course Format & Style
This is a core course in the MPA program and an elective for any other graduate program. The course is lecture-, discussion-, and practice-oriented.

Prerequisites
There are no prerequisites for this course although it is desirable (but not mandatory) for students to take V506 before taking this course.

Office Hours
My office hours are Monday and Wednesday from 12:00– 1:00 PM in SPEA 351, or by appointment. If you would like to attend my office hours, please simply stop by during that time; I do not schedule meetings at set increments within office hours. If you cannot make my office hours, please email me and we can find another time.

Student Conduct and Support

Student Responsibilities
There are also several more concrete student responsibilities that will help you succeed in this course, including the following:
- Students are expected to attend all class sessions. Because this is an eight-week course offering, missing just one session will be problematic.
- Participation in this course is required. Participation, however, comes in many forms: answering or asking questions in class, attending class, engagement with peers in small discussion sessions and team projects.
- All readings must be completed before the class period in which the reading is due.
- Students are expected to refrain from checking email, texts, or other social media during class hours.

Academic Integrity

You are expected to adhere to the Indiana University guidelines regarding academic standards and behavior. I expect that all work you turn in will be your own. If you synthesize or rely on other people's ideas or words to make your argument, you must cite them. Please take a moment to review your responsibilities here: *https://studentcode.iu.edu/.*

Use of AI (such as ChatGPT) in this class: Using AI (such as ChatGPT) to assist in completing assignments in this class is prohibited. If you do use AI, you will be committing plagiarism[1] and will be subject to penalties in this class and sanctions by Indiana University.

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.

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.

Accessibility and Accommodations
Indiana University is dedicated to ensuring that students with disabilities (e.g., chronic health, neurodevelopmental, neurological, sensory, psychological & emotional, including mental health, etc.) have the support services and reasonable accommodations needed to provide equal access to academic programs. To request an accommodation, you must establish your eligibility by working with ability Services for Students (iubdss@indiana.edu or 812-855-7578). Additional information can be found at accessibility.iu.edu. Note that services are confidential, may take time to put into place, and are not retroactive; captions and alternate media for print materials may take three or more weeks to get produced. Please contact your campus office as soon as possible if accommodations are needed.

I am happy to accommodate any special academic needs for students with the required DSS documentation. Please let me know within the first two weeks of class if you have any accommodation or accessibility needs or concerns.

Course Policies

1. **Attendance:** Students are allowed two unexcused absences, and absences are excused at the sole discretion of the instructor. Additional unexcused absences will be reflected

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[1] **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.

negatively in the participation grade. If you anticipate chronic absences (whether due to family emergencies, financial issues, illness, etc.), please speak to the instructor and allowances may be made on a case-by-case basis.

2. **Make-up Exams:** There are no in-class exams for this course. In the event of missed presentations, students should speak with the instructor to determine the appropriate course of action. If the student has prior knowledge of a conflict preventing them from attending an in-class presentation, it is up to that student to disclose their conflict to the instructor as soon as they are aware of the issue. Special arrangements may be determined on a case-by-case basis.

3. **Late Assignments:** If you face any problems completing your work (whether due to family emergencies, financial issues, technology failures, illness, etc.), please talk to the instructor and reasonable arrangements may be made. In the case of unexcused late work, 10% will be deducted each day from the total grade for the assignment.

4. **Technology Use:** Technology will be permitted in the classroom for the express purpose of taking notes and other tasks directly related to the course. The instructor retains the right to ask students to put technology away in the case that it is found to distract students from the course materials or is otherwise used inappropriately.

5. **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.

6. **Incompletes:** The grade of Incomplete used on the final grade reports indicates that work is satisfactory as of the end of the semester but has not been completed. The grade of Incomplete may be given only when the completed portion of a student's work in the course is of passing quality. Instructors may award the grade of Incomplete upon a showing of such hardship to a student as would render it unjust to hold the student to the time limits previously fixed for the completion of his/her work.

Possible analytical software applications used in the course
The course is "tool agnostic" and requires students identify their own approach, with resources provided. Software programs that students may choose among include R, Tableau Desktop, Python, and Excel. *This policy does not refer to use of AI/ChatGPT (see above).*

Writing Resources
This course seeks to help students improve their writing skills. There are several assignments that require writing. If you need help with writing, IU offers writing tutorial services, which you can access here: http://wts.indiana.edu/.

Assignments and Grading

This course will involve several assignments, a case competition, and a final exam. The grade breakdown is as follows.

Participation	25%
Homework assignments (each worth 10%)	30%
Case competition report (GROUP)	16%
Case competition presentation (GROUP)	16%

Case competition effort	8%
Final discussion post	5%

We have a final discussion post in lieu of an exam. This discussion post will ask you to reflect on the course material and respond to a prompt that requires a cumulative understanding of course material.

Participation is based on attendance, punctuality, engagement in the content and discussion, respect demonstrated towards others, and an effort to participate in class. Participation is a large part of one's grade because this class is highly interactive. Attendance is required in this class. Please see the attendance policy for more details. Please also plan to arrive to class on time since it is distracting to have students walk in late.

Discussion posts are graded on effort and quality of content. Homework assignments are graded using the grading rubric (below).

The full case competition grade includes a report, a presentation, and a participation grade. The first two are a group grade, based on the quality of the submitted assignment and graded according to a rubric. The participation grade is based on a self-evaluation, a peer-review, and my own evaluation.

Grade Conversion

Assignments will be graded through Canvas using a point system. The letter grades will be converted as follows:

A+ 98.0%	B+ 87.0%	C+ 77%	D+ 67.0%	F 00.0%
A 93.0%	B 83.0%	C 73%	D 63%	
A- 90.0%	B- 80.0%	C- 70%	D- 60%	

The letter grade conversion above also applies to course grades. The instructor may round up the final course grade ONLY if you are within .5% of the next letter grade.

Course Readings

This class mostly relies on articles and online readings or talks. In the last two class sessions, I assign readings in two books:

1. Schwabish, J. 2021. Better data visualizations: A guide for scholars, researchers, and wonks. Columbia University Press: New York City.
2. Schwabish, J. 2016. Better presentations: A guide for scholars, researchers, and wonks. Columbia University Press: New York City.

These books are available online through the IU library at no cost. You may elect to purchase these books—they offer excellent guides and examples for visuals and presentations—but it is *not* required or necessary for this course.

Course Schedule

Please note that the following schedule is subject to limited change in the event of extenuating circumstances.

Week Number	Topic Number	Assignment	Assignment Due Date
Week 1 (August 26 – September 1)	Intro + Topic 1 + Topic 2	Identify group and topic/research question for case competition	September 1, 11:59 PM
Week 2 (September 2 – September 8) September 2 – No class	Topics 3 + 4		
Week 3 (September 9 – September 15)	Topics 5	Literature Review	September 15, 11:59 PM
Week 4 (September 16 – September 22)	Topics 6 + 7	Validity Threat Memo	September 22, 11:59 PM
Week 5 (September 23 – September 29)	Topics 8	Workflow Assignment	September 29, 11:59 PM
Week 6 (September 30 – October 6)	Topics 9 + 10	Case Competition Report & Slides	October 6, 11:59 PM
Week 7 (October 7 – October 13)	Case Competition Presentations	Case Competition Presentations in class	We will sign up in class
Week 8 (October 14 – October 18) Final Exam Week	Case Competition Presentations + Wrap Up Discussions	Final Discussion Post + Case Competition Effort	October 18, 11:59 PM

Topic 1. Asking the right question and establishing purpose (Week 1)
Objectives: To convince an audience to read or listen to you, one must first establish a clear and concise question that drives their analysis and explain why the topic is of relevance. Our objective is to learn what it takes to accomplish each, and then practice the art.
Readings: • Bardach, E., Patashnik, E.M. A practical Guide for Policy Analysis. Skim pages xv-xvii; Read 1-14. • Ang, S. H. 2014. Research Design for Business & Management. Sage Publications Ltd. Chapter 3. The Research Question. Pages 50-56; 67-end of chapter.
In-class Practice Activities: • Speed dating our questions and purpose/problem statements
Out of Class Exercise: Articulate a research question and purpose statement that aligns with your professional interests. We will use this question and purpose throughout the rest of the course.
Assignments: None

Topic 2. Finding resources and using/discussing them effectively (Week 1)
Objectives: Learn what resources exist to help in research, and how to effectively discuss and arrange them in formal writing.

Readings:
- Knopf, J. (2006). Doing a Literature Review. *PS: Political Science & Politics, 39*(1), 127-132. https://www.cambridge.org/core/journals/ps-political-science-and-politics/article/abs/doing-a-literature-review/00B62000B6760AB78E1BD27E32A94C9F
- Website on evaluating sources for quality (here)
- (Optional) Why We Cite: https://www.youtube.com/watch?v=AUdaXW3lCIw
- (Optional) How to Use Sources https://www.youtube.com/watch?v=JI2xS3C-oYc
- (Optional) Website Evaluation Guide and Checklist (here)
- (Optional) Ang, S. H. 2014. Research Design for Business & Management. Sage Publications Ltd. Chapter 3. The Research Question. Pages 62-67.
- (Optional) Hewitt M., How to Search and Critically Evaluate Research Literature. The NIHR RDS for the East Midlands / Yorkshire & the Humber, 2007. Only 9-25 (though I encourage you to skim the rest for a good review of how this topic connects the Topic 1) https://www.rds-yh.nihr.ac.uk/wp-content/uploads/2013/05/6_Critically-evaluate-research-literature-2009.pdf

In-class Practice Activities:
- In your groups, return to research question and purpose statements. Choose a compelling one. Find a government source, academic source, journal article/book, newspaper article, etc. on the topic. Discuss the source—what is it, where did you find it, how credible is it, how will you use it in the lit review?

Assignments: Find a group and a topic; email to Professor Silva and Zaw

Topic 3. Effective writing for different audiences (Week 2)
Objectives: Learn and practice the elements of formal writing; understand the differences among various types of writing outputs.

Readings:
- Norton, R. "The elements of like totally good style."
- Baxter, Lester W., and Marc T. Braverman, "Communicating Results to Different Audiences." In Foundations and Evaluation: Contexts and Practices for Effective Philanthropy, edited by Marc T. Braverman, Norman A. Constantine and Jana Kay Slater (San Francisco: Jossey-Bass 2004) (here).
- (Optional) Communicating Data to an Audience by Steven Drucker, Samuel Huron, Robert Kosara, Jonathan Schwabish, and Nicholas Diakopoulos (here)

In-Class Practice Activities
- For this group exercise you are going to conduct an audience analysis and provide a summary of an academic article. First, you will collectively choose an academic article of interest that you are going to summarize (let's take the same groups and articles from last week). Second, you will each choose a non-expert audience that you are going to explain the paper to. This audience could be the general public, decision makers, or any other non-experts. Third, you are going to provide a summary of the article with the audience you chose in mind.

Assignments: With your case competition group, draft a **literature review** that connects your research question and purpose statement. Begin by stating your question and purpose at the top of the document, then present your literature review. This review should be two to three single-spaced pages. **Due at 11:59 PM on Canvas.**

Topic 4. Data! (Week 2)
Objectives: Know the difference between primary and secondary data; identify secondary data sources; understand the format in which data may be available; consider what we do with data.
Readings:

- "[You Don't Have to Be a Data Scientist to Fill This Must-Have Analytics Role](#)," by Nicolaus Henke, Jordan Levine, and Paul McInerney, *Harvard Business Review*, February 8, 2018.
- Hox, J.J., Boeije, H.R. Data collection, primary vs. secondary. 2005.
- Mona Chalabi, "What we miss when we focus on the average." Am I Normal? TED Series. https://www.ted.com/talks/mona_chalabi_what_we_miss_when_we_focus_on_the_average
- (Optional— note that we will not cover data management in this class but these are great skills to develop!) UITA IT does different trainings and they have a training series on Excel. The courses are [here](#). The give a certificate if you complete all the courses, but you can also complete the courses individually. They have five courses: The Basics; Charts and Graphics; Working With Data; Basic Automation Using Macros; Analyzing Data with PivotTables.
- (Optional) Josh Jones, 2018. Creating insights from the data around us. TEDx Birmingham. https://www.ted.com/talks/josh_jones_creating_insights_from_the_data_around_us

In-Class Practice Activities:
- Think about the topic for which you wrote a literature review and what kinds of information or variables you might need to study the topic in greater depth.
- Bonus: Identify some possible places where one could locate those data or how one could collect them if using a primary data gathering technique.

Assignments: None

Topic 5. Establishing validity (Week 3)

Objectives: Understand and articulate different types of validity threats, including internal, external, and other threats.

Readings:
- O'Sullivan, E., Rassel, G. R., Berner, M. 2007. Research Methods for Public Administrators, 6th Edition. Pearson. Chapter 3, only pages 58-69.
- (Optional) Drost, E. A. Validity and reliability in social science research. *Education Research and Perspectives* 38(1).

In-Class Practice Activities:
- Read articles in groups and discuss validity threats

Assignments: Find a peer-reviewed article that is related to your topic of interest. Identify a validity threat in the analysis. Write a one-page memo to the author(s) explaining the threat, how it compromises the analysis, and how you suggest mitigating that threat.

Topic 6. Ethics in research and normative assumptions (Week 4)

Objectives: Consider the various ethical issues involved in performing research on a topic, including a discussion human subjects, choosing a methodological approach, and presenting data.

Readings:
- O'Sullivan, E., Rassel, G. R., Berner, M. 2007. Research Methods for Public Administrators, 6th Edition. Pearson. Chapter 8.
- Tuskegee Syphilis Experiment Revealed: https://www.youtube.com/watch?v=vz4jE7huhMA
- (Optional) Carley, S. 2011. Normative dimensions of sustainable energy policy. *Ethics, Policy & Environment* 14(2): 211-229.
- (Optional) https://www.washingtonpost.com/history/2022/07/26/tuskegee-syphilis-experiment-50-years/

In-Class Practice Activities: TBD

Assignments: None

Topic 7. Workflow (Week 4)

Objectives: Learn the value and practice of tracking one's workflow, so that all results can be replicated by others and/or in the future.
Readings:
• Watch WIM presentation, first 35 minutes (the rest is optional) (here)
• (Optional) Long, S. The workflow of data analysis using Stata. Chapter 1.
In-Class Practice Activities:
• Begin Workflow assignment (if time allows)
Assignments:
• Workflow assignment—see canvas.

Topic 8. Gathering primary data (Week 5)
Objectives: Learn about the different ways to gather primary data and consider the pros and cons of each, including how they relate to secondary data; consider how to approach human subjects and how to phrase questions and prompts.
Readings:
• O'Sullivan, E., Rassel, G. R., Berner, M. 2007. Research Methods for Public Administrators, 6th Edition. Pearson. Chapter 7.
In-Class Practice Activities:
• In small groups, create survey instruments, interview templates, and focus group templates.
Assignments: None

Topic 9. Data visualization (Week 6)
Objectives: Understand types of visuals, what makes a visual good or bad, consider ethical dimensions of visuals, and practice software skills for making visuals.
Readings:
• Chapters 1-3: Schwabish, J. 2021. Better data visualizations: A guide for scholars, researchers, and wonks. Columbia University Press: New York City.
• Do No Harm Guide: Applying Equity Awareness in Data Visualization by Schwabish (link)
• (Optional) Berinato, Scott, "Visualizations That Really Work," *Harvard Business Review*, June 2016.
• (Optional) Chapter 1: Why Visualize? From *Data Visualization: Charts, Maps, and Interactive Graphics* by Robert Grant (book is available as an ebook at the library)
Optional Practice Activities:
• Practice making visuals: Here is a website with a lot of different visuals, and you can download the data for every visual. Or start with raw data and make visuals: UN Sustainable Development Goals project
In-Class Practice Activities: Break into teams, seek out data source, and make a compelling visual to represent the data together (if time allows).
Assignments: Case Competition Report.

Topic 10. Effective presentations (Week 6)
Objectives: Learn about and practice giving effective presentations.
Readings:
• Anderson, Chris, "How to Give a Killer Presentation, Lessons from TED," *Harvard Business Review*, June 2013.

• Schwabish, J. 2016. "Better Presentations: A Guide for Scholars, Researchers, and Wonks" (Read Chapter 0 and 1, skim the rest) • (Optional) R. A. Hites, "How to give a scientific talk, present a poster, and write a research paper or proposal," *Environmental Science and Technology*, 2014, *48*, 9960-9964.
In-Class Practice Activities: • Build a layered slide deck for a presentation on "What XXX Movie Got Right About Society" [please choose as a group what to fill in for XXX, such as Space Balls, Zoolander, Don't Look Up, etc.]
Assignments: None

Additional Information and Resources for Students

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

Emergency Food Relief
Food insecurity is a real challenge for many in our community, including students. Recent research estimates ~41% of students at 4-year colleges and universities are food insecure. If you find you are in need of food and do not have the resources to purchase it, please consider utilizing the emergency food relief system on campus and in the community. The following units/agencies are here to assist with food relief:

> *Crimson Cupboard:* https://studentaffairs.indiana.edu/student-support/crimson-cupboard/index.html
> *Emergency Meal Project @ IU*: https://www.dining.indiana.edu/news-updates/emergency-meal.html
> *Mother Hubbard's Cupboard Food Pantry:* https://www.mhcfoodpantry.org/
> *Other pantries:* https://www.foodpantries.org/ci/in-bloomington

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 no later than two weeks prior to the anticipated absence. 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: Religious Observances: Teaching Resources: Faculty Resources: Office of the Vice Provost for Faculty & Academic Affairs: Indiana University Bloomington.

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.

Sexual Misconduct and Title IX
As your instructor, one of my responsibilities is to create a positive learning environment for all students. IU policy prohibits sexual misconduct in any form, including sexual harassment, sexual assault, stalking, sexual exploitation, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help. If you are seeking help and would like to speak to someone confidentially, you can make an appointment with the IU

Sexual Assault Crisis Services at (812) 855-5711, or contact a Confidential Victim Advocate at (812) 856-2469 or cva@indiana.edu.

It is also important that you know that University policy requires me to share certain information brought to my attention about potential sexual misconduct, with the campus Deputy Sexual Misconduct & Title IX Coordinator or the University Sexual Misconduct & Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist. Visit http://stopsexualviolence.iu.edu/index.html to learn more.

Commitment to Diversity: Find your home and community at IU
Asian Culture Center
Address: 807 East Tenth Street, Bloomington, IN 47408
Phone: 812-856-5361
Email: acc@indiana.edu
Website: https://asianresource.indiana.edu/index.html

First Nations Educational & Cultural Center
Address: 712 E 8th St., Bloomington, IN 47408
Phone: 812-855-4814
Email: fnecc@indiana.edu
Website: https://firstnations.indiana.edu/contact/index.html

Jewish Culture Center
Address: 730 E 3rd St., Bloomington, Indiana 47401
Phone: 812-336-3824
Website: https://iuhillel.org/iu-jewish-culture-center

LGBTQ+ Culture Center
Address: 705 E 7th St., Bloomington, Indiana 47408
Phone: 812-855-4252
Email: glbtserv@indiana.edu
Website: https://lgbtq.indiana.edu/contact/index.html

La Casa Latino Culture Center
Address: 715 E 7th St., Bloomington IN, 47408
Phone: 812-855-0174
Email: lacasa@indiana.edu
Website: https://lacasa.indiana.edu/

Neal Marshall Black Culture Center
Address: 275 N Jordan Ave Bloomington, Indiana 47405
Phone: 812-855-9271
Email: nmgrad@indiana.edu
Website: https://blackculture.indiana.edu/index.html