

PUBHEPI 6431 – Design and Implementation of Health Surveys

3 credits – Spring 2026

Wednesdays and Fridays at 11:10-12:30 in the Journalism Building Room 304

**Course Instructor**

Arbor Quist, PhD, Epidemiology, University of North Carolina at Chapel Hill, 2021  
Cunz 310 (1841 Neil Ave), 614-292-7764

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**Instructor's Office Hours**

Tuesdays 1:30-2:30pm (in Cunz 310 or via [Zoom](#))

**Faculty Feedback & Response Time**

The following gives you an idea of my intended availability during the course:

- **Grading:** You can generally expect feedback within 10 days.
- **E-mail:** I will reply to e-mails (sent via Carmen) within 48 hours on school days.
- **Discussion board:** Either the TA or the instructor will check and reply to messages in the discussion boards at least every 48 hours on school days, and by the next business day on weekends or university holidays, unless a different turnaround time (due to travel, etc.) is announced.

**Graduate Teaching Assistant (GTA)**

Hannah Piscalko, [piscalko.2@buckeyemail.osu.edu](mailto:piscalko.2@buckeyemail.osu.edu)

**GTA Responsibilities**

The TA may assist with scoring assignments; however, final grades will be assigned by the professor. **Any questions regarding grading should be directed to the professor and not the TA.**

**Course Description**

This course covers the fundamentals of survey methodology with an emphasis on the practical skills necessary to design and conduct sample surveys in public health. Students gain perspective on the types of biases and errors that arise in survey research and learn how to minimize their effect. Major topics covered are target populations and sampling frames, methods of survey administration, questionnaire design and evaluation, and survey operations. Note that this is not a course on survey sampling methods or the statistical analysis of data from surveys. Students interested in these topics should consider taking PUBHBIO 7225/STAT 6510: Survey Sampling Methods.

**Prerequisites**

PUBHEPI 6410 or 6430, or PUBHLTH 6001 or permission of instructor.

## **Course Learning Objectives**

1. Explain the conceptual basis of survey research and describe its role in public health studies.
2. Compare and contrast at least two modes of survey administration, identifying advantages and limitations of each.
3. Evaluate aspects of survey design (e.g., sampling, question wording) and justify how these influence the validity of inferences to a target population.
4. Identify and classify types of error (coverage, sampling, measurement, nonresponse) and propose at least two strategies to minimize bias in survey estimates.
5. Design a survey instrument that includes a clear structure, appropriate question types, and logical flow.
6. Revise individual questions and survey format based on findings from a cognitive evaluation.
7. Summarize key features of at least three large national surveys and interpret how they can be used for public health research.

## **Competencies:**

### MPH foundational public health competencies:

1. Apply epidemiological methods to settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
8. Apply awareness of cultural values and practices to the design, implementation, or critique of public health policies or programs
18. Select communication strategies for different audiences and sectors
19. Communicate audience-appropriate (i.e. non-academic, non-peer audience) public health content, both in writing and through oral presentation
22. Apply systems thinking tools to visually represent a public health issue in a format other than standard narrative

### MPH (Epidemiology):

1. Design a survey to examine a public health problem or for use in an epidemiologic investigation
2. Choose the correct analysis for data obtained from an epidemiologic investigation, including data from surveys, matched and unmatched case-control studies, cohort studies, and clinical trials

A complete list of College of Public Health Competencies is located on the College of Public Health website: <https://cph.osu.edu/students/competencies>.

### **Text/Readings:**

Robert Groves, Floyd Fowler, Mick Couper, James Lepkowski, Eleanor Singer, Roger Tourangeau. Survey Methodology, Second Edition. John Wiley and Sons, Inc: NJ, 2009. ISBN 0-470-46546-8

Additional readings will be listed on the Carmen site.

### **Carmen**

There is a Carmen site for this course: <https://carmen.osu.edu>. All course materials are available via Carmen.

You will need to use BuckeyePass ([buckeyepass.osu.edu](https://buckeyepass.osu.edu)) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (<https://admin.resources.osu.edu/buckeyepass/adding-a-device>)
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application (<https://admin.resources.osu.edu/buckeyepass/installing-the-duo-mobile-application>) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

### **Class Format: How this course works**

- **Mode of delivery:** This is an in-person class that meets on Wednesdays and Fridays. There may be a few classes replaced with online lectures and discussions.
- **Credit hours and work expectations:** This is a **3-credit-hour course**. According to Ohio State policy ([go.osu.edu/credithours](https://go.osu.edu/credithours)), students should expect around 3 hours per week of time spent on direct instruction (e.g., in-person activities, lecture) in addition to 6 hours of homework/active learning activities (e.g., reading textbook, completing assignments) to receive a grade of (C) average.

**Attendance and participation requirements:** Participation plays an essential role in learning; you are warmly invited, encouraged, and expected to attend all class sessions. Participation in class is important not only for your learning, but also for our ability to build a community together and maintain a sense of connection and commitment to one another. Your engagement with the material (or lack-there-of) affects the experience of other students in the course. Your presence in class matters. Class participation grades will reflect your preparation for class and your ability to contribute meaningfully to discussion. Throughout the semester we will have in-class exercises that will provide opportunities for you to engage with the

course materials and to get feedback on components of your survey proposal as well as provide feedback to others; your attendance is critical. If you miss class, it is your responsibility to make arrangements with another student to be filled in on what you missed. Please do not email me to inform me about your absence from class unless you are experiencing an ongoing problem that may make it difficult for you to continue to attend class, complete assignments, or take an exam. If you are absent for an exam, and have not made prior arrangements with me, you will not be permitted to take a make-up exam.

## Course Technology

### *Technology skills needed for this course*

- Basic computer and web-browsing skills
- Navigating Carmen ([go.osu.edu/canvasstudent](http://go.osu.edu/canvasstudent))
- CarmenZoom virtual meetings ([go.osu.edu/zoom-meetings](http://go.osu.edu/zoom-meetings))

### *Required equipment*

- **Computer:** current Mac (Mac OSX) or PC (Windows 10+) with high-speed internet connection
- **Calculator:** Students should have access to a scientific calculator that can perform basic arithmetic, square roots, logarithms, and exponentiation.
- **Other:** a mobile device (smartphone or tablet) to use for BuckeyePass authentication

### *Optional equipment (for participation in optional live office hours)*

- **Webcam:** built-in or external webcam, fully installed and tested
- **Microphone:** built-in laptop or tablet mic or external microphone

### *Required software*

- **Microsoft 365 Copilot (formerly Office 365)**  
All Ohio State students are now eligible for free Microsoft 365 Copilot (formerly Office 365). Full instructions can be found at [go.osu.edu/office365help](http://go.osu.edu/office365help).

### *Technology support*

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** <http://it.osu.edu/help>
- **Phone:** 614-688-4357(HELP)
- **Email:** [servicedesk@osu.edu](mailto:servicedesk@osu.edu)

## Assignments/Assessments

### *Exams: 30%*

There will be two in-class exams that will evaluate your understanding of material presented in the textbook and in class. The format of the exam will be similar to the types of questions you will encounter in the homework assignments, including multiple choice and short essay questions. Make-up exams may be permitted if you cannot take the exam at the schedule time, and we have discussed the situation before the exam. If you are absent for an exam, and have not made prior arrangements with me, you will not be permitted to take a make-up exam.

*Assignments: 60%*

**Homework assignments (30% final grade):** We will have 5 homework assignments, which are designed to help you prepare for the exams. All students will have a two-day grace period with no late penalty. After the two-day grace period, no assignments will be accepted, unless prior arrangements have been made with the instructor. All assignments must be submitted on Canvas; emailed assignments will not be accepted.

**Group Survey Proposal Project (30% final grade):** Working in groups of ~5, students will develop a proposal to conduct a survey on a health topic of their interest. A requirement of the project is specification of a sampling plan that would result in a representative sample of a defined target population. A major component of the survey project is the group's development, evaluation, and revision of a survey instrument. Specific instructions will be provided.

### **Grading**

Student performance in this course will be evaluated as follows:

- 10% Class participation
- 30% Homework assignments
- 30% Exams
- 30% Survey proposal project

### **Grading Scale**

<b>A</b>	<b>94 to 100</b>	Outstanding work that reflects mastery of the material and the ability to apply it
<b>A-</b>	<b>90 to &lt;94</b>	Excellent work that reflects mastery of the material
<b>B+</b>	<b>87 to &lt;90</b>	Good work that reflects mastery of most of the material
<b>B</b>	<b>84 to &lt;87</b>	Good work that reflects mastery of some of the material
<b>B-</b>	<b>80 to &lt;84</b>	Good work that reflects mastery of a few aspects of the material
<b>C+</b>	<b>77 to &lt;80</b>	Mediocre work that reflects familiarity with, but not mastery of the material
<b>C</b>	<b>74 to &lt;77</b>	Mediocre work that reflects familiarity with most of the material
<b>C-</b>	<b>70 to &lt;74</b>	Mediocre work that reflects little familiarity with the material
<b>D+</b>	<b>67 to &lt;70</b>	
<b>D</b>	<b>61 to &lt;67</b>	
<b>E</b>	<b>Below 61</b>	

### **Class Policies**

Students are not permitted to upload course materials to Quizlet, Chegg, or other websites. Students are strongly encouraged to not use cell phones during class, except for emergencies. Students are expected to attend and participate in class.

### **Copyright Statement**

This syllabus and all course materials (e.g., homework assignments, solution keys, course materials) are under copyright by the instructor and cannot be posted elsewhere without written permission.

## **Generative AI Policy**

Given that the learning goals of this class are aligned with the Council on Education for Public Health (CEPH) and OSU's General Elective expectations, the use of generative artificial intelligence (GenAI) tools such as Copilot or ChatGPT, or writer's aids like Grammarly is not permitted in this course. Any use of GenAI tools for work in this class may therefore be considered a violation of Ohio State's Academic Integrity policy and Code of Student Conduct because the work is not your own. If we suspect that you have used GenAI on an assignment for this course, we will ask you to explain your process for completing the assignment in question. The unauthorized use of GenAI tools will result in referral to the Committee on Academic Misconduct. There may be an occasional assignment during which GenAI may be used, but this would be very clearly stated both in class and in the assignment. Unless otherwise indicated, GenAI is not permitted in this course.

## **Office of Student Life: Disability Services**

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let me know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; or [slds.osu.edu](http://slds.osu.edu).

## **Mental Health Services**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting [ccs.osu.edu](http://ccs.osu.edu) or calling [614-292-5766](tel:614-292-5766). CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at [614-292-5766](tel:614-292-5766) and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

## **Religious Beliefs or Practices Accommodations**

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for

religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the [Civil Rights Compliance Office](#). (Policy: [Religious Holidays, Holy Days and Observances](#))

### **Academic Misconduct**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee ([Faculty Rule 3335-5-48.7 \(B\)](#)). For additional information, see the [Code of Student Conduct](#).

### **Intellectual Diversity**

Ohio State is committed to fostering a culture of open inquiry and intellectual diversity within the classroom. This course will cover a range of information and may include discussions or debates about controversial issues, beliefs, or policies. Any such discussions and debates are intended to support understanding of the approved curriculum and relevant course objectives rather than promote any specific point of view. Students will be assessed on principles applicable to the field of study and the content covered in the course. Preparing students for citizenship includes helping them develop critical thinking skills that will allow them to reach their own conclusions regarding complex or controversial matters.

## **Grievances and Solving Problems**

A student who encounters a problem related to his/her educational program has a variety of avenues available to seek resolution. According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, you may take your case to the department chairperson. Specific procedures are outlined in [Faculty Rule 3335-8-23](#), the [CPH Graduate Student Handbook](#), and the [CPH Undergraduate Student Handbook](#). Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

## **Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct**

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office:

Online reporting form at <http://civilrights.osu.edu/>,  
Call 614-247-5838 or TTY 614-688-8605,  
Or Email [civilrights@osu.edu](mailto:civilrights@osu.edu)

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Civil Rights Compliance Office to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

## Course Outline

Week	Class	Date	Readings & Topics	Group Survey Proposal Project
1		1/14	<b>Introduction to survey research</b> Read: The syllabus Read: Groves Chapter 1	Begin thinking about and formulating a topic/research question for the group survey proposal that you will develop throughout this course.
		1/16	[No class]	
2		1/21	<b>Measurement objectives &amp; sources of error in surveys</b> Read: Groves Chapter 2  <b>Homework 1 DUE 1/21 at 10pm</b>	Revise and refine your topic for your survey proposal.  By <b>10pm on 1/23</b> , one member of your group will submit the topic and group member names.
		1/23	<b>Measurement objectives &amp; sources of error in surveys</b>	
3		1/28	<b>Target populations &amp; sampling frames</b> Read: Groves Chapter 3  <b>Homework 2 DUE 1/28 at 10pm</b>	
		1/30	<b>Target populations &amp; sampling frames</b> Read: Schnell, R., Klingwort, J. Health estimate differences between six independent web surveys: different web surveys, different results?. <i>BMC Med Res Methodol</i> 24, 24 (2024).	
4		2/4	<b>Ethics in survey research</b> Read: Groves Chapter 11  <b>Guest speaker:</b> Dr. HB Franchino-Olsen  <b>Homework 3 DUE 2/4 at 10pm</b>	Determine the human subjects approvals that your proposed survey would require. Would information you proposed to collect be anonymous? Confidential? Consider how you would enroll participants and what informed consent process you would create.

Week	Class	Date	Readings & Topics	Group Survey Proposal Project
		2/6	<b>Guest speaker:</b> Dr. Abigail Norris Turner	Determine the target population for your proposed survey. Begin to think about possible sampling frames, and the coverage error associated with them. How feasible would it be to get these sampling frames?
5		2/11	<b>Ethics in survey research</b>	
		2/13	<b>EXAM 1</b>	
6		2/18	<b>Understanding complex sample design</b> Read: Groves Chapter 4	Think about and start to draft the sample design you will propose for your survey. Make sure that the design results in a probability sample of your target population.
		2/20	<b>Understanding complex sample design</b>	<b>Planning outline due 2/20 at 10pm</b>
7		2/25	<b>Data collection methods</b> Read: Groves Chapter 5  <b>Homework 4 DUE 2/25 at 10pm</b>	Determine the method(s) of administration for your survey.
		2/27	<b>Data collection methods</b>	
8		3/4	<b>Nonresponse</b> Read: Groves Chapter 6  <b>Homework 5 DUE 3/4 at 10pm</b>	Think about the procedures you could use to reduce non-response in your proposed survey. Given your chosen topic and method of administration do you think that non-response bias would be a large source of error?
		3/6	<b>Nonresponse</b>	
9		3/11	<b>EXAM 2</b>	
		3/13	<b>Ecological momentary assessment (EMA)</b>	

Week	Class	Date	Readings & Topics	Group Survey Proposal Project
SPRING BREAK				
10		3/25	<b>Writing good questions</b> Read: Groves Chapter 7	
		3/27	<b>Working with community partners to write good questions</b>  <b>Group Survey Proposal planning outline DUE 3/27 at 10pm</b>	Begin drafting questions for your survey (stems and response options): do not worry about formatting at this point.
11		4/1	<b>Guest Speaker: Dr. Courtney Lynch</b>	
		4/3	<b>Evaluating questions</b> Read: Groves Chapter 8	Revise your questions and begin to draft introductions and transitions as appropriate to your mode of administration.  "Test" your survey instrument.
12		4/8	<b>Formatting a survey instrument</b>	Revise your questions based on the cognitive interviewing. Revise and format your survey instrument as appropriate to the mode of administration.
		4/10	<b>Group Survey Proposal – Cognitive interview due 4/10 at 10pm</b>  <b>Group project work on survey instruments</b>	
13		4/15	<b>Peer review of survey instruments</b>	<b>Turn in your formatted survey instrument before class on 4/15 for peer review</b>

<b>Week</b>	<b>Class</b>	<b>Date</b>	<b>Readings &amp; Topics</b>	<b>Group Survey Proposal Project</b>
		4/17	<b>Interviewer training</b> Read: Groves Chapter 9	Determine the human subjects approvals that your proposed survey would require. Would information you proposed to collect be anonymous? Confidential? Consider how you would enroll participants and what informed consent process you would create.
14		4/22	<b>AI and machine learning in health surveys</b> Read: Groves Chapter 10	
		4/24	<b>Survey operations &amp; data management</b>	<b>Final Group Survey Proposal Project DUE by 10pm on 4/25</b>

## Alignment of Competencies with Assessments

Competencies	Homework	Exams	Survey Proposal Project
MPH foundational public health competencies:			
1. Apply epidemiological methods to settings and situations in public health practice	x	x	x
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x
8. Apply awareness of cultural values and practices to the design, implementation, or critique of public health policies or programs			x
18. Select communication strategies for different audiences and sectors			x
19. Communicate audience-appropriate (i.e. non-academic, non-peer audience) public health content, both in writing and through oral presentation			x
22. Apply systems thinking tools to visually represent a public health issue in a format other than standard narrative			x
MPH (Epidemiology):			
1. Design a survey to examine a public health problem or for use in an epidemiologic investigation			x
2. Choose the correct analysis for data obtained from an epidemiologic investigation, including data from surveys, matched and unmatched case-control studies, cohort studies, and clinical trials	x		x