

Course Title: *Survey Research Methods in Epidemiology*

Course Number: *EPID 0621*

Course Pre- and Co-requisite(s): Successful completion of PHCO0504 Introduction to Biostatistics and PHCO0502 Principles of Epidemiology

Course Instructor: *Marian R. Passannante, PhD, Professor, Department of Biostatistics and Epidemiology* marian.passannante@rutgers.edu

Office Hours: *by appointment, online (Thursdays 5-6pm beginning September 8 and additional times TBD)*

Course Assistant: Reyna Maybloom rem206@sph.rutgers.edu

Course Website: canvas.rutgers.edu

Required Course Text:

1. Nardi, Peter M. **Doing Survey Research: A Guide to Quantitative Methods, Fourth Edition, 2018** (e-book available through the Smith Library and can be purchased online)
2. **The Sage Handbook of Survey Methodology** eBook accessed through the George Smith Library (enter the book title in the quick search box for full access, click on the title and then choose SAGE knowledge)

Additional/Supplemental Readings/Resources

Reading/Listening assignments include journal articles that are available online via the Smith Library, or on the course Canvas website, and YouTube videos.

Data analysis will be conducted using the **JMP statistical package**, which is available on the Rutgers Virtual Computer Lab. Navigate to this link: <https://labgateway.rutgers.edu/#/>. Sign in using your Rutgers netid and password. If you want to upload a dataset from canvas, be sure to save it in your ONEDRIVE folder so that you can access it through the virtual desktop. You may also download a 30 day free trial of the JMP software by going [here](#).

Course Description: The purpose of the course is to introduce students to the basics of survey research and to provide them with the skills necessary to conduct their own survey research.

Selected Concentration Competencies Addressed: The competencies addressed in this course for the MPH **Epidemiology Concentration** include:

- EPID 1: Critique epidemiologic literature, assess its strengths and weaknesses and determine if conclusion(s) are supported.
- EPID 3: Formulate a specific hypothesis and determine an appropriate study design and analysis plan.
- EPID 4: Design, implement and assess ordinary data collection systems for public health research.
- EPID 5: Design and implement basic quality control methods during data entry and analysis.
- EPID 6: Appropriately analyze and interpret epidemiologic data, including large national and state level datasets.
- EPID 7: Communicate and present study findings to professional audiences.

The competencies addressed in this course for the MPH **Urban Public Health Concentration** include:

- URPH 5: Evaluate the scientific evidence related to urban public health issues.

- URPH 6: Apply methods to develop and assess programs and strategies that protect or endanger the health and well-being of urban populations.

Please visit the Concentration webpages on the School of Public Health's website at sph.rutgers.edu for more information about the curriculum and competencies for our degrees and concentrations.

Course Objectives:

By the completion of this course, students will be able to:

- Describe the basic elements of survey research
- Describe the major modes of survey administration
- Calculate a survey response rate and describe factors that can influence survey response rates
- Conduct a critical review of the literature
- Develop survey items
- Measure validity and reliability of a survey instrument
- Pre-test and pilot test a survey instrument
- identify an appropriate epidemiologic study design for a survey project
- Develop a sampling and analysis plan for survey project
- Describe human subjects protections in survey research
- Assess the quality of a survey manuscript
- Create a codebook/data dictionary
- Administer a simple survey
- Collect and clean survey data
- Conduct basic statistical analysis of survey data using a statistical package
- Develop charts and graphs to explicate data
- Present study results in writing and through graphical displays

Course Communication:

The instructor will communicate with students primarily through the tools within the Canvas course. If you have a question that you feel may help other students as well, please post your question in the "Class Help: Ask A Question" discussion thread. If you have a personal concern or question you would like to talk about, please email the instructor directly. Students may also use Rutgers or Canvas e-mail to send questions to the instructor or other students. When sending an email to the instructor (or course assistant), please include "EPID 0621" in the subject line. Students who would like to speak to the instructor by phone or video call, should make an appointment via e-mail at marian.passannante@rutgers.edu. Office hours are posted on Canvas and individual may be scheduled by appointment for phone or online meetings.

During the work week, the instructor will aim to respond to personal emails or your posts directed to the instructor within 48 hours. For communications posted/emailed over the weekend, the instructor will try to respond by the end of the business day on Tuesday for most situations. If the instructor is out of town without Internet access, the instructor will post a note in Canvas in Announcements.

Fostering Course Community: The instructor will work to foster community through discussion boards, chat sessions, online activities, etc. Students are encouraged to get to know each other and contribute their particular strengths, expertise, and experience to enrich the class. Working with your classmates, explaining concepts to each other, and interacting with your instructor (and course assistant, if assigned) are the most effective ways to understand the course concepts and succeed in this course. By posting questions on Canvas (rather than via email) the entire class has the benefit of learning from the discussions, so please consider posting your question as a first option.

Canvas Announcements: This course will use Announcements in Canvas to share course information, highlight lessons learned, and send reminders. Be sure you review your notification settings in Canvas so that you receive these

Announcements using your preferred contact method. In addition, please be sure to check the Announcements tab at least once each week in the Canvas shell for this course.

Module Schedule: All course deadlines are listed in Eastern Time Zone. Canvas will record all deadlines in this time zone. If you are in a different time zone, plan accordingly.

This is an asynchronous, online course that will be completed in 15 weeks (called modules) during the fall semester. **Each week will begin on a Monday at noon and will end the following Monday at 11:59 am.** Module assignments will be due at noon the following Monday, unless otherwise noted in the course schedule. Some **optional synchronous tutorial sessions** may be offered to assist students.

Most modules will include assigned readings and videos, a self-assessment quiz and at least one graded homework assignment and/or graded quiz. Some items within modules must be completed before being able to advance to the next item, even if no points are assigned. Please note that there are a number of individual assignments as well as group assignments (with 2 or more students). Assignment rubrics and some sample assignments will be posted on the Canvas course site in order to assist you.

By the end of each week, you should complete the following:

- 1) Reading/Viewing the assigned materials. PowerPoint slides for instructor created videos are included.
- 2) A self-assessment (formative assessment) quiz, if assigned. These quizzes will be automatically graded by Canvas, the learning management system. No points will be assigned to these quizzes, rather they are to help you to see how well you understand the course material.
- 3) Graded homework assignments and/or quizzes, if assigned for that week. You are expected to follow the honor code and complete these homework assignments and quizzes independently, unless instructions specify that you may/should work with a partner or group. These assignments are due by 12:00pm on Mondays EST following the week that it is assigned.

All assignments and quizzes will have closing dates listed in Canvas (see Syllabus tab on the left side of the Canvas course screen for a list of assignments and dates).

Important: In order to complete all of the module assignments, you should plan to spend approximately 9 hours per week on the course material for a total of approximately 145 hours of course-related activities (discussion boards, assignments, papers, readings, etc).

Course Requirements and Grading:

The four major assignments and the competencies that assess mastery of these competencies appear in the table below. Rubrics for each major assignment include assessments of student mastery of competencies.

Assignment/Assessments	Competencies Addressed	% Value	Due at 11:59am
<p>Assignment I -Your Independent Survey Project Proposal</p> <p>Each student will develop his/her own individual (hypothetical) health survey project that includes</p> <ul style="list-style-type: none"> • A statement of your research question and survey objective; • A description of your target population, your sample, and the proposed survey mode. Include a description of who will be included in your sample (with justification) and the proposed survey mode (provide a justification for your choice of survey mode); • A critical review of the relevant literature (2-3 pages maximum), with citations (must use APA format) • Provide the pubmed or scopus search with search terms. <p>Note: students may wish to select a topic relevant to their concentration (e.g. an urban public health topic)</p>	<ul style="list-style-type: none"> • EPID 1: Critique epidemiologic literature, assess its strengths and weaknesses and determine if conclusion(s) are supported; • EPID 3: Formulate a specific hypothesis and determine an appropriate study design and analysis plan; • URPH 5: Evaluate the scientific evidence related to urban public health issues. 	15	Oct 10
<p>Assignment II- Individual (hypothetical) health survey project.</p> <p>1. Revisions to Assignment I (if necessary) for these items only (NOT THE LITERATURE REVIEW)</p> <ul style="list-style-type: none"> • A statement of your research question and survey objective; • A description of your target population, your sample, and the proposed survey mode. <p>2. A clear description of your chosen:</p> <ul style="list-style-type: none"> • Study design • Independent and dependent variables and how they will be measured; • Sampling Plan and Power Calculation • An introduction letter (1 page) and brief survey instrument (5 pages maximum) that could be used to address your research question. 	<ul style="list-style-type: none"> • URPH 6: Apply methods to develop and assess programs and strategies that protect or endanger the health and well-being of urban populations. • EPID 3: Formulate a specific hypothesis and determine an appropriate study design and analysis plan; • EPID 4: Design and implement basic quality control methods during data entry and analysis 	15	Nov 14

Assignment/Assessments	Competencies Addressed	% Value	Due at 11:59am
<p>Assignment III- Critiquing a Survey Article Read Best Practices article (#1 below) and use it to critique the paper presented below (#2 below), using Criteria 1-10 found at the end of the Best Practices article. Students will independently prepare and submit responses to all 10 criteria.</p> <ol style="list-style-type: none"> 1. Draugalis JR, Coons SJ, Plaza CM. Best practices for survey research reports: a synopsis for authors and reviewers. Am J Pharm Educ. 2008;72(1):11. doi:10.5688/aj720111. 2. Diana Paksarian, PhD, MPH, Kara E. Rudolph, PhD, MPH, MHS, Jian-Ping He, MSc, and Kathleen R. Merikangas, PhD, School Start Time and Adolescent Sleep Patterns: Results From the US National Comorbidity Survey—Adolescent Supplement, (Am J Public Health. 2015;105:1351–1357). https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2015.302619 	<ul style="list-style-type: none"> • EPID 1: Critique epidemiologic literature, assess its strengths and weaknesses and determine if conclusion(s) are supported; • URPH 5: Evaluate the scientific evidence related to urban public health issues. 	15	Nov 21
<p>Assignment IV- Group Survey Data Analysis You will be supplied with survey data from our class group project. You will be assigned a research question that must be answered. Analyze your data and present a written description of the results along with a graphical display of your findings.</p>	<ul style="list-style-type: none"> • EPID 4: Design and implement basic quality control methods during data entry and analysis; • EPID 6: Appropriately analyze and interpret epidemiologic data, including large national and state level datasets; and • EPID 7: Communicate and present study findings to professional audiences 	15	Dec 21
<p>Weekly Graded Assignments/Assessments (Quizzes) most worth 3 points each</p>		35	End of Module Week
<p>Wiki Participation</p>		5	End of Module Week
<p>Total</p>		100	

Class Survey Group Project

- The class will develop a group web-based survey research project. Students are expected to fully participate in the process. This process will include reviewing the relevant literature, creating multiple drafts of the instrument (using a Wiki) and a final codebook (using a Wiki), developing an analysis plan (using a Wiki), collecting the data (via a SurveyMonkey survey), cleaning the data, conducting preliminary data analysis on the pilot data and presenting your results.
- Because the purpose of the class project is educational, it is not clear that this data collection exercise meets the technical definition of "research" in 45 CFR 46.102 (d). According to 45 CFR 46 research is defined as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge". However, to be on the safe side the Rutgers IRB asked that I submit an IRB for this project and that we follow the criteria for exemption. Based upon the guidelines for exemption, two constraints will be followed: survey respondents will be anonymous, and the content of the survey will not address sensitive or threatening topics. We will also submit our final survey to the IRB for their review prior to administration of the class survey.
- The 2022 group survey project: **Public Health Students' Trust in the US Health Care and Public Health Systems.** We will begin by reviewing a survey on the Public's Trust in the in US Health Care System that can be found at <https://www.norc.org/Research/Projects/Pages/surveys-of-trust-in-the-u-s-health-care-system.aspx>. We have been given permission to use questions from the [Public Survey](#) and we will add additional questions about the Public Health System.

	Date (may be adjusted)
IRB submitted	Nov 1
Preletter sent (pending IRB approval)	Nov 14
Round 1 of class survey	Nov 15
Round 2 of class survey	Nov 22
Round 3 of class survey	Nov 29
Close data collection	Dec 5
Post codebook and study data	Dec 6
Analysis of study data & report writing	Dec 7-21
Submission of Study Results	Dec 21

Grading

Assignments will be graded using SpeedGrader and students will be able to view course grades by clicking on Grades on the left side of the Canvas course screen. Answers for self-assessments will be posted immediately as the students are taking these assessments, as will grades for any multiple-choice graded quizzes. Correct answers for graded quizzes will be posted for a limited time on the Wednesday of the week following the quiz. For other types of assignments (e.g. Assignment I-IV), every effort will be made to grade assignments within 1 week of the assignment due date. Students can expect to receive numeric scores and instructor comments on all non-multiple-choice assignments. Grades for these assignments will be released once all student assignments are graded. Late assignments will not be accepted unless arrangements are made with the instructor prior to the assignment due date. There will be no extra credit assignments in this course. However, each student will receive 1 extra point if 75% or more of the class completes the anonymous end of courses evaluation.

Grading Scheme:


94 – 100	A
90 – <94	A-
87 – <90	B+
84 – <87	B
80 – <84	B-
77 – <80	C+
70 – <77	C
<70	F

Course Schedule:

Week/ Module #	Module Title	Competen cies fully or partially addressed in this module	Module level learning objectives. At the end of this module students should be able to:	Assigned Readings and Viewing	Activities, Assignments and Quizzes (% of final grade)
Sept 6 Module 1	Introduction to the Course		<ol style="list-style-type: none"> 1. Navigate the Canvas course site 2. Describe the Academic Honesty Policy 3. Create a video using Canvas 4. Participate in a Group Collaboration document 	View Instructor's Videos <ul style="list-style-type: none"> • A tour of the course site (on Canvas Home Page) • Welcome to the Course Video • Scarlet Mail • Major Assignment Videos • Sample Introduction Video (see Week 1 Homework) • Week 1 Student Survey Textbook: Nardi, Chapter 1: Why We Do Research, pp.1-25.	<ul style="list-style-type: none"> • Create your Own Introduction Video and Discussion Post on Week 1 Homework (1) • Class Information and Honor Code Quiz (.5) • First Collaboration Document (.5) • Ungraded Activities: <ol style="list-style-type: none"> 1) View Week 1 Videos 2) Add Picture to Profile 3) Activate Scarlet Mail 4) Activate Voice Thread 5) Complete Student Survey
Sept 12 Module 2	Introduction Survey Research Terminology	EPID 3	<ol style="list-style-type: none"> 1. Describe the difference between a census and a survey 2. Differentiate between the target population, sampling frame and sample 3. Define basic survey terminology 4. Describe the process to identify an individual health survey topic 	Textbook: Nardi, Chapter 2: Finding Ideas to Research, pp. 26-37. Article: ROBERT M. GROVES The Public Opinion Quarterly, Vol. 75, No. 5, 75th Anniversary Issue (2011), pp. 861-871 Background for class survey project: Public Health Students' Trust in the US Health Care and Public Health Systems by reviewing the Background Resources in the 2022 Class Survey Project Materials Module . View Module 2 Videos	<ul style="list-style-type: none"> • Complete Terminology Self-Assessment • Complete Week 2 Homework NY Times Survey (3) • Complete Week 2 Homework: Post your idea for Individual Assignment I survey.

Week/ Module #	Module Title	Competencies fully or partially addressed in this module	Module level learning objectives. At the end of this module students should be able to:	Assigned Readings and Viewing	Activities, Assignments and Quizzes (% of final grade)
Sept 19 Module 3	Self-Administered Surveys (one to one, group administered, mail, web-based)	EPID 1 EPID 3 URPH 5	<ol style="list-style-type: none"> 1. Describe the advantages and disadvantages associated with self-administered surveys 2. Calculate a survey response rate 3. Describe methods to maximize the survey response rate for self-administered survey 	<p>View Module 3 Videos</p> <p>Textbook: Nardi, Chapter 4: Developing A Questionnaire, pp. 71-78.</p> <p>Article: Eysenbach, G. Improving the Quality of Web Surveys: The Checklist for Reporting Results of Internet E-Surveys (CHERRIES). Journal of Medical Internet Research. 2004;6(3):e34.</p> <p>View 2020 US Census Form</p>	<ul style="list-style-type: none"> • Participate in Voice Thread Discussion of Assigned Scenarios • Self-Administered Survey Quiz (formative assessment) • Week 3 Homework: Group Administered, Mail and Web-based Surveys Discussion (3) • Begin to work on your PUBMED or SCOPUS literature search and begin to write your Literature Review. • Review material related to Week 5 Assignment I in Major Assignments and Rubrics Module • Continue to search for literature for Class Survey.
Sept 26 Module 4	Interview Surveys (telephone and in-person) and Mixed-Mode Survey	EPID 1 EPID 3 URPH 5 URPH 6	<ol style="list-style-type: none"> 1. Describe the advantages and disadvantages associated with interview surveys 2. Write an introductory statement for a telephone or in-person interview 3. Design an eligibility screen for an interview survey 4. Describe methods to maximize the survey response rate for interview surveys 5. Describe the advantages and disadvantages of Mixed Mode Surveys 6. Describe the major forms of computer assisted interviewing technology 	<p>Review Week 3 Discussion Assignment Instructor's Suggested Answers</p> <p>View Module 4 Videos</p> <p>Read Textbook: SAGE Handbook of Survey Methodology Chapter 11: Survey Mode or Survey Modes?, Chapter 18 Designing a Mixed Mode Survey and Chapter 27 Unit Nonresponse</p> <p>View examples of Interview Survey NHANES Consumer Behavior Module Interview Survey and mixed mode survey NSF Survey of Earned Doctorates</p>	<ul style="list-style-type: none"> • Complete PlayPosit exercise for introductory statements and eligibility screen (ungraded) • Interview Survey Quiz (formative assessment) • Week 4 Homework: Telephone, In person and Mixed Mode Surveys (3) • Work on Group Wiki for Class Survey • Continue to work or PUBMED or SCOPUS literature search and writing Literature Review Assignment I
Oct 3 Module 5	Conducting a literature search for a literature review	EPID 1 EPID 3 URPH 5 URPH 6	<ol style="list-style-type: none"> 1. Develop a research question 2. Conduct a PUBMED or SCOPUS literature search 3. Prepare a literature review 4. Write and edit class survey questions 	<p>View Module 5 Videos View Sample Assignment I</p> <p>Textbook: Nardi, Chapter 3: Concepts, Hypotheses and Measurement, pp.46-52</p>	<ul style="list-style-type: none"> • Submit Assignment I (15) • Continue to work on Group Wiki for class survey • Begin to work developing questions for Assignment II

Week/ Module #	Module Title	Competencies fully or partially addressed in this module	Module level learning objectives. At the end of this module students should be able to:	Assigned Readings and Viewing	Activities, Assignments and Quizzes (% of final grade)
Oct 10 Module 6	Developing the Instrument: Asking Questions	EPID 3 EPID 4 URPH 6	1. Develop valid questions	View Module 6 Videos Textbook: Nardi, Chapter 3: Concepts, Hypotheses and Measurement, pp.53-60 Textbook: SAGE Handbook of Survey Methodology, Chapter 16: Designing Questions and Questionnaires, Jolene D. Smyth Highlights from National Academies of Sciences, Engineering, and Medicine	<ul style="list-style-type: none"> Week 6 Question Development Quiz (1) Post questions to Class Survey Wiki (2 pts for 3 weeks) Week 6 Homework: Question Topic Areas and Sources for Individual Survey Assignment II (2)
Oct 17 Module 7	Developing the Instrument: Choosing Responses	EPID 3 EPID 4 UGPH 6	1. Provide valid response options	View Module 7 Videos Textbook: Nardi, Chapter 4: Developing A Questionnaire, pp. 78-102. Article: CDC Evaluation briefs No. 23 updated August 2018 Review Likert Scale Examples for Surveys	<ul style="list-style-type: none"> Week 7 Response Options Development Quiz (1) Week 7 Homework: Questions and Responses for Individual Assignment II (2) Post edits to Class Survey Wiki (graded) Instructor will combine all questions and post them by next Wednesday. We will finalize the survey by the end of week 8.
Oct 24 Module 8	Developing the Instrument: Reliability and Validity	EPID 3 EPID 4 URPH 6	1. Identify and describe reliability measures 2. Identify and describe validity criteria 3. Add measures of reliability and validity to a survey instrument 4. Distinguish between a scale and an index	View Module 8 Videos Textbook: Nardi, Chapter 3: Concepts, Hypotheses and Measurement, pp.60-70 Articles: Mohsen Tavakol, Reg Dennick, Making Sense of Cronbach's alpha, International Journal of Medical Education. 2011; 2:53-55 Santos, J Cronbach's Alpha: A Tool for Assessing the Reliability of Scales, April 1999 Volume 37 Number 2 Brazier JE, et al. Validating the SF-36 health survey questionnaire: new outcome measure for primary care. BMJ. 1992 Jul 18;305(6846):160-4. Review SF 36 Short form	<ul style="list-style-type: none"> Week 8 SF 36 Validation Quiz (Formative Assessment) Week 8 Validity and Reliability Quiz (3) Continue to work on Individual Assignment II, adding at least 1 measure of reliability or validity to your survey Post edits to Class Survey Wiki including letters to participants in Discussion
Oct 31 Module 9	Putting it together, Developing the Instrument: Pretesting	EPID 3 EPID 4 URPH 6	1. Put together a questionnaire 2. Describe the elements of questionnaire pretesting	View Module 9 videos Articles: "How to Conduct Effective Pretests"	<ul style="list-style-type: none"> Pretesting and Pilot Testing Quiz (Formative) Continue to work on Individual Assignment II, include at least 1

Week/ Module #	Module Title	Competencies fully or partially addressed in this module	Module level learning objectives. At the end of this module students should be able to:	Assigned Readings and Viewing	Activities, Assignments and Quizzes (% of final grade)
	and Pilot testing a Survey Instrument		3. Describe the elements of questionnaire pilot testing 4. Conduct a pilot test of a survey instrument	Edwin R. van Teijlingen and Vanora Hundley, The importance of pilot studies, Gordon B. Willis, PhD and Anthony R. Artino, Jr., PhD What Do Our Respondents Think We're Asking? Using Cognitive Interviewing to Improve Medical Education Surveys. J Grad Med Educ. 2013 Sep; 5(3): 353–356. Calderón, J. Morales, L. Liu, H and Hays, R. Variation in the Readability of Items Within Surveys Am J Med Qual. 2006 ; 21(1): 49–56	measure of reliability or validity to your survey <ul style="list-style-type: none"> Review Reading Grade Level Report for draft class survey
Nov 7 Module 10	Study Designs, Sampling Plan and Power Analysis	EPID 3 EPID 4 URPH 6	1. Describe the characteristics of commonly used study designs 2. Describe the most commonly probability and non-probability sampling methods 3. Described the information needed to conduct a sample size calculation	View Module 10 videos Textbook: Nardi, Chapter 5: Sampling, pp. 114-134. Articles: Draugalis and Plaza, Best Practices in Survey Research Reports-Revisited Price, JH, et. al Power Analysis in Survey Research: Importance and Use for Health Educators, American Journal of Health Education, July/August 2005, Vol 36, No. 4. Review Sample Assignment II	<ul style="list-style-type: none"> Week 10: Sampling Plan, Study Design and Power Analysis Quiz (2) Week 10 Exercise: Worked Example of a Sample Size Calculation (1) Submit Assignment II (15) <p>Note: Assignment III opens up at the beginning of this week and will remain open for 2 weeks</p>
Nov 14 Module 11	Human Subjects Issues in Survey Research Critiquing Survey Research	EPID 1 EPID 3 URPH 5	1. Describe the human subjects issues in survey research 2. Critique a survey article	View Module 11 video (first 57 minutes and 31 seconds of <i>Constructing Ethical Surveys and Research Questionnaires</i>) Textbook: Nardi, Chapter 2: Finding Ideas to Research, pp. 38-45. Complete CITI training	<ul style="list-style-type: none"> Answer 3 embedded questions in the Module 11 video (1) Submit CITI training certificate (2) Submit Assignment III (15)
Nov 21 Module 12	Developing a Data Analysis Plan and Developing a Timeline	EPID 3 EPID 5 EPID 6	1. Describe the elements of a study timeline 2. Develop an analysis plan	View Module 12 Videos Textbook: Nardi, Chapter 5: Presenting Data Descriptive Statistics, pp. 135-160 Articles: Developing a Quantitative Data Analysis Plan for Observational Studies Review 2018 SRM Data Analysis Plan  Download JMP 30 day free trial After November 21 Complete JMP tutorials 1. Using JMP	<ul style="list-style-type: none"> Add to Week 12 Class Data Analysis Plan Wiki (1)

Week/ Module #	Module Title	Competen cies fully or partially addressed in this module	Module level learning objectives. At the end of this module students should be able to:	Assigned Readings and Viewing	Activities, Assignments and Quizzes (% of final grade)
				<p>2. Graphical Displays and Summaries</p> <p>3. Probabilities and Distributions</p> <p>4. Basic Inference - Proportions and Means</p>	
Nov 28 Module 13	Creating a Codebook Collecting and Cleaning Data	EPID 5	<ol style="list-style-type: none"> 1. Create a codebook 2. Describe how a codebook is used prior to data collection 3. Describe how a codebook is used after data collection 4. Begin to use JMP statistical package 5. Conduct data cleaning activities 	<p>View Module 13 Videos</p> <p>Textbook: Nardi, Chapter 4: Developing A Questionnaire, pp. 103-113.</p> <p>View Data Coding Rules</p>	<ul style="list-style-type: none"> • Post to Week 13 WIKI Codebook (2) • Week 13 Codebook Quiz (3) • Week 13 Homework: Data Cleaning Assignments: Problems 1,2 and 3 (3)
Dec 5 Module 14	Data Analysis	EPID 4 EPID 6 EPID 7	<ol style="list-style-type: none"> 1. Complete Preliminary Data Analysis Activities 2. Explore survey data 3. Answer research question by conducting Univariate, Bivariate and Multivariate Analysis 	<p>View Module 14 Videos</p> <p>Textbook: Nardi, Chapter 6: Presenting Data Bivariate Relationships, pp. 160-203 and Nardi, Chapter 8: Presenting Data Descriptive Statistics, pp. 204-226.</p> <p>Review Santos, J Cronbach's Alpha: A Tool for Assessing the Reliability of Scales, April 1999 Volume 37 Number 2</p> <p>Read Information Sheet on How to Generate Cronbach's alpha in JMP</p> <p>Read Helpful Hints when using JMP</p> <p>Review Assignment IV Guidelines</p>	<ul style="list-style-type: none"> • Complete Week 14 Homework: Data Analysis (3) • Work on Individual Assignment IV Analysis of Group Survey Data
Dec 12 Module 15	Data Presentation	EPID 4 EPID 6 EPID 7	<ol style="list-style-type: none"> 1. Communicate Study Findings in writing 2. Communicate Study Findings graphically 	<p>View Module 15 Videos</p> <p>Textbook: Nardi, Chapter 9: Presenting Results, Making Conclusions, and Writing Reports, pp. 227-246.</p> <p>Article: Norris, M et al. Guidelines for Reporting Quantitative Methods and Results in Primary Research, Language Learning 65:2, June 2015, pp. 470-476</p>	<ul style="list-style-type: none"> • Submit: Individual Assignment IV Analysis of Group Survey Data (15) by December 21

Learning Management System: Canvas will be used throughout the semester for course syllabus, assignments, announcements, communication and/or other course-related activities. It is the student's responsibility to familiarize themselves with Canvas and check it regularly. If you have difficulties accessing Canvas, please inform the instructor and Canvas Support (help@oit.rutgers.edu). Canvas is accessible at canvas.rutgers.edu.

School of Public Health Honor Code: The School of Public Health Honor Code is found in the School Catalog (sph.rutgers.edu/academics/catalog.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another's work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the School community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Students with Disabilities: Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student must apply for Services by first completing a Registration Form with the Rutgers Office of Disability Services (ODS) at ods.rutgers.edu. The student will also be required to participate in an ODS intake interview and provide documentation. If reasonable accommodations are granted, ODS will provide you with a Letter of Accommodations which should be shared with your instructors as early in your courses as possible.

Commitment to Safe Learning Environment: The Rutgers School of Public Health is committed to helping create a safe learning environment for all students and for the School as a whole. Free expression in an academic community is essential to the mission of providing the highest caliber of education possible. The School encourages civil discourse, reasoned thought, sustained discussion, and constructive engagement. Provocative ideas respectfully presented are an expected result. An enlightened academic community, however, connects freedom with responsibility. The School encourages all students to disclose any situations where you may feel unsafe, discriminated against, or harassed. Harassment or discrimination of any kind will be not tolerated and violations may lead to disciplinary actions.

Student Well-Being: The School of Public Health recognizes that students may experience stressors or challenges that can impact both their academic experience and their personal well-being. If the source of your stressors or challenges is academic, students are encouraged to discuss these challenges and circumstances with their instructor, if they feel they may need additional support or temporary accommodations at the beginning or during this course. The course instructor may consider making reasonable temporary adjustments depending on the student's situation. For personal concerns or if additional support is needed, students may reach out to the Office of Student Affairs (studentaffairs@sph.rutgers.edu) or any of the appropriate referral resources listed on the SPH Student Connect Canvas page.

Reporting Discrimination or Harassment: If you experience any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking, know that help and support are available. You may report such incidents to the [RBHS Title IX Office](#) or to the School of Public Health's [Office of Student Affairs](#). Rutgers University has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. If you experience any other form of discrimination or harassment, including racial, ethnic, religious, political, or academic, please report any such incidents to the School's [Office of Student Affairs](#). The School strongly encourages all students to report any incidents of discrimination or harassment to the School. Please be aware that all Rutgers employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers as listed in Appendix A to [Policy 10.3.12](#)) are required to report information about such discrimination and harassment to the School and potentially the University. For example, if you tell a faculty or staff member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty or staff member must share that information with the [RBHS Title IX Coordinator](#). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can find a list of resources in Appendix A to University [Policy 10.3.12](#). For more information about your options at Rutgers, please visit [Rutgers Violence Prevention and Victim Assistance](#).

Overview of School Policies: Academic and non-academic policies and procedures, such as Auditing a Course, Retaking Courses, Grade Grievance and others that cover registration, courses and grading, academic standing and progress, student rights and responsibilities, graduation and more may be found under Policies on the School of Public Health website. Below are select specific policies; however, students are responsible for keeping informed about academic and non-academic policies and procedures beyond those noted on this syllabus.

Graduate Student Computer Policy: Students are required to possess a personal laptop, no older than approximately two years, that must meet minimum requirements which may be found online at: sph.rutgers.edu/student-life/computer-support.html

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.

Policy Concerning Use of Turnitin: Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com (directly or via learning management system, i.e. Canvas) for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. Students who do not agree should contact the course instructor immediately.

Withdrawal/Refund Schedule: Students who stop attending their course(s) without submitting a completed [Add/Drop Course](#) form will receive a failing grade. Furthermore, students dropping to zero credits for the semester are considered withdrawn and must submit a completed [Leave of Absence](#) form from the School of Public Health's Office of Student Affairs. The School of Public Health refunds tuition only. Administrative and technology fees are non-refundable. You may find the Withdrawal/Refund Schedule on the School of Public Health website at: sph.rutgers.edu/academics/academic-calendar.html

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