Course Title: Survey Research Methods and Questionnaire Design

Course Number: QNME 0621

Course Location: NJMS MSB F506b and MSB Academic Computing Center

Course Date & Time: Thursdays 5:30-8:30pm

Course Instructor: Marian R. Passannante, PhD

Professor and Vice Chair, Department of Preventive Medicine, NJMS
Interim Chair (designate), Department of Quantitative Methods: Epidemiology & Biostatistics, School of Public Health
Office Address: 185 South Orange Avenue MSB F 588, Newark, NJ 07090
Office number: 973 972-4775
passanna@njms.rutgers.edu

Office Hours: by appointment


Additional/Supplemental Readings/Resources: Reading assignments include journal articles that are available online, via the Smith Library, or on the class Moodle website, and YouTube videos.

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 Department Competencies Addressed: Each Department identifies competencies for each degree offered. The competencies addressed in this course for the MPH for the Department of Quantitative Methods: Epidemiology and Biostatistics include:

- QNME 3. Critically evaluate epidemiological data and findings
- QNME 4. Communicate results from epidemiologic studies
- QNME 5. Demonstrate proficiency in the use of a variety of software packages used in epidemiology (e.g., JMP, SAS and Epi-Info)
- QNME 8. Conceptualize public health or clinical research questions using quantitative methods

Please visit the Department webpages on the School of Public Health’s website at http://sph.rutgers.edu/ for additional competencies addressed by this course for other degrees and departments.

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

- 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
Create a codebook/data dictionary
Administer a simple survey
Collect and clean survey data
Conduct basic statistical analysis of survey data using the JMP statistical package
Develop charts and graphs to explicate data
Present results orally to an audience

Course Requirements and Grading:

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<tr>
<th>Assignment/Assessments</th>
<th>% of grade</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Assignment I - Your Independent Survey Project Proposal</td>
<td>15%</td>
<td>Oct 9</td>
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</table>

Each student will develop his/her own individual (hypothetical) health survey project. Think of this whole assignment (Parts A and B) as the first few sections of a proposal to conduct a survey that might be submitted to a granting agency or to the IRB. You need to convince the reviewer that this is a well thought out project and that it will provide important new information that will advance the field. All information should be presented in paragraph form, as if it were part of a formal proposal.

Part A- Prepare and submit a word document that includes:

1. A statement of your research question and survey objective;
2. 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);
3. A critical review of the relevant literature (2-3 pages maximum), with citations (must use APA format). The literature review should include information on the content/subject area as well as a discussion of other surveys which have been conducted on this topic. You want to conduct a survey that will advance what has already been done in the field either by collecting new information or by conducting a survey in a new population.

You will also prepare and submit a 5-minute PowerPoint presentation that describes items 1-3 above. Submit Word and PowerPoint files electronically prior to coming to class (no later than 3pm). You will present this to the class for critique and suggestions.

APA format resource: http://owl.english.purdue.edu/owl/resource/560/01/
Writing a literature review resources:
Online video resources for conducting a literature review:
https://www.youtube.com/watch?v=daUL3JsrqTw
http://writingcenter.fiu.edu/resources/synthesis-matrix-2.pdf
### Assignment I Part B - Individual (hypothetical) health survey project.

Prepare and submit a word document that includes:

1. (If necessary) A **revised** statement of your research question and survey objective;
2. (If necessary) A **revised** description of your target population, proposed sample and proposed survey mode, with justifications;

**New for this assignment:**

3. A clear description of your chosen:
   a. Study design
   b. Independent and dependent variables and how they will be measured;
   c. Sampling Plan - include how the sample will be selected (please refer to your textbook on sample selection and we will cover this in class as well), and a justification for your choice;
4. A brief survey instrument (5 pages maximum) that could be used to address your research question. Do your best to present a high quality **final draft survey** with all necessary questions, instructions and introductory letter/e-mail. The 5 page limit does not include the introductory letter/e-mail. **You do not need to create follow-up letters/e-mails for this assignment.** If you are using survey items from a previously developed survey, please footnote the source(s) for the question items. Note that this should be a final draft survey, not a preliminary one, so that it should look like it would to someone who is a member of the sample.

<table>
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<tr>
<th>Assignment II - Critiquing a Survey Article</th>
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<th>Nov 13</th>
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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. Both articles are available online either by searching or via the Smith library e-journals search engine. Students will **independently** prepare and submit responses to all 10 criteria. Responses should be presented in full sentences or in paragraph form, not in bullets.

1. JoLaine Reierson Draugalis, PhD, Stephen Joel Coons, PhD, and Cecilia M. Plaza, PharmD, PhD, Best Practices for Survey Research Reports: A Synopsis for Authors and Reviewers American Journal of Pharmaceutical Education 2008; 72 (1) Article 11
Assignment III
You will be supplied with survey data from our class group project. Groups of 1 or 2 students (depending on the class size) will be assigned a research question that must be answered. Analyze data and present the results of a survey using graphics. Prepare a 10 minute (5 minutes per if groups of 2 students) PowerPoint presentation of the analysis for class presentation. Please include the text of your description of your results in Notes associated with each slide. Submit an electronic version of your PowerPoint presentation to me by 3pm on the day of the presentation.

When preparing your PowerPoint slides consider the following:

- Present the research question(s) being addressed
- Describe data source(s)- the names of the variables described
- Present and describe your independent and dependent variables and their measurement scales (nominal, ordinal, numeric)
- Present the data in tabular and graphic form (e.g. r x c tables and mosaic plots for proportions, summary statistics, box plots, stem and leaf diagrams or histograms) Make sure that graphics are easy to read and interpret; if possible, make them interesting as well.
- When presenting results:
  - For proportions
    - provide 95% Confidence Intervals and Interpretation of results in words
  - For significance testing
    - provide name(s) of test with justification for choice and pre-set alpha level, p value & Interpretation of results in words
- Rules of Thumb for Slide Presentation
  - Try to keep to no more that 5 lines per slide and 5 words per line
  - For a 10 minute presentation- try to keep it to 10 slides (1 per minute)

Useful website:
http://virg.vanderbilt.edu/AssessmentPlans/results/Reporting_Results_Quantitative.aspx

Class Participation
Students are expected to participate in class. If students have too many absences, this will be reflected in their class participation grade.

Final Examination (in class). Short Answer Questions from material presented in class and assigned readings.

Class Survey
The class will develop a group web-based survey research project. Students are expected to participate in the process fully both during and outside of class. This process will include reviewing the relevant literature, creating multiple drafts of the instrument and a final codebook, collecting the data, cleaning the data, conducting preliminary data analysis on the pilot data and presenting your results.
Because the purpose of the class project is educational, this data collection exercise does not meet the definition of "research" in 45 CFR 46.102 (d) and thus an IRB review is not technically required. 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". We will, however, follow the criteria for exemption. In following 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.

- The 2014 group survey project will be to create and administer a survey of Newark Campus public health students regarding their knowledge and attitudes toward Complementary and Alternative Medicine.
- All students should begin by downloading and reviewing the following documents:

Class Attendance
If you are unable to attend class, e-mail me to let me know BEFORE class or the MORNING AFTER class, at the latest. Even excused absences should be kept to a minimum.

Late Assignments
Late Assignments will not be accepted, unless prior arrangements have been made with the instructor.

Course Schedule:
Beginning on the next page, you will find a week by week schedule of the topics that will be covered in class. Please note for most weeks you will have a reading assignment (which should be completed prior to coming to class) and a homework assignment (which should be completed before the next class session). The final examination may contain information that is specifically covered in class as well as material covered in the reading and homework assignments.

Unless otherwise noted, classes will meet each week in NJMS MSB F506b (the Preventive Medicine and Community Health Conference Room).
<table>
<thead>
<tr>
<th>Week #</th>
<th>Date</th>
<th>Topic/Assignment</th>
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<tbody>
<tr>
<td>Week # 1</td>
<td>September 4</td>
<td>Overview of the Course (PowerPoint)</td>
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<td>Assignment prior to the first class:</td>
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<td>1) Review Week 1 Power Point Presentation and</td>
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<td>2) View this Youtube: <a href="https://www.youtube.com/watch?v=daUL3JsrgTw">https://www.youtube.com/watch?v=daUL3JsrgTw</a></td>
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<td>Homework Assignment:</td>
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<td>• Begin to identify your individual survey topic by reviewing the literature.</td>
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<td>• Read: Sheuren Frits, What is a Survey. PDF file available at <a href="http://www.whatisasurvey.info/">http://www.whatisasurvey.info/</a></td>
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<td>6:30pm-8:30pm: Searching the Literature Session (Academic Computing Laboratory)</td>
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<td>Week #2</td>
<td>September 11</td>
<td>Overview of Survey Research Methods and Modes of Administration</td>
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<td>Self-Administered and Mail Surveys</td>
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<td>Reading Assignments: Chapters 1 and 5- Aday Text</td>
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<td>(mail) National Immunization Survey (provider’s survey) <a href="http://www.cdc.gov/nchs/nis/about_nis.htm">http://www.cdc.gov/nchs/nis/about_nis.htm</a></td>
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<td>“About the National Immunization Survey” and “Overview of NIS” sections of the webpage</td>
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<td>In class activity: Divide into groups to develop survey items and exchange contact information.</td>
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<td>Week #3</td>
<td>September 18</td>
<td>Telephone and in-person surveys</td>
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<td>Reading Assignment: Complete the Behavioral Risk Factor Surveillance Survey (BRFSS) interviewer training module <a href="http://www.cdc.gov/brfss/training/interviewer/index.htm">http://www.cdc.gov/brfss/training/interviewer/index.htm</a></td>
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<td>Read National Health and Nutrition Examination Survey (NHANES) history <a href="http://www.cdc.gov/nchs/nhanes/History.htm">http://www.cdc.gov/nchs/nhanes/History.htm</a></td>
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### Week #4  
**September 25**

**Computer Assisted Surveys**

**Reading Assignment:**
- Conducting Research Surveys via E-mail and the Web (Rand Corporation)  
- Primary Care Physicians and Eye Health (national web-based survey)  

**Homework:** Come to class prepared to answer the following questions about your Individual Health Survey Project (Assignment I-A):
1. What is your research question (i.e., the major question you want to answer)?
2. What is your survey objective (i.e., the purpose of the project -to estimate, to test a hypothesis, or to evaluate a treatment or program)?
3. Who is in your target population (i.e., the larger group you are interested in learning about)?
4. Who will be in your sample (i.e., the smaller group from which you will make inferences about the target population)?
5. Which survey mode do you plan to use (i.e., the method(s) used to collect the survey data (e.g. mail, computer assisted, web-based, phone)?

**In class activity:** Review draft questions and responses

**Homework assignment:**
Type up survey questions and responses in Word and submit them by Tuesday September 30th.

### Week #5  
**October 2**

**Part 1: Developing the Instrument: Asking Questions and Choosing Responses**

**Reading Assignment:** Chapters 8 through 11 - Aday Text

- Choi BCK and Pak AWC. A Catalogue of Biases in Questionnaires. Preventing Chronic Disease Vol 2, No. 1 January 2005  

**Part 2: Developing the Instrument: Validity and Reliability**

**Reading Assignment:** Chapters 3 and 4 - Aday Text

**In class activity:** Revise First Draft of Class Survey

**Homework Assignments:***
- Review 1st complete draft of survey
  - Use assigned articles when evaluating questions
  - Be sure that you have instructions and transition statements for your new sections
  - Prepare pre-letter and reminder letters
  - If you know content experts, ask their opinion of questions

Submit all draft2 materials by Tuesday October 14.
| Week #6  Oct 9 | Assignment I A Due today-Class Presentations  
Note: All students are expected to attend this session and critique the proposals. 
Active participation in this session is expected and will be part of the class participation grade. |
|----------------|---------------------------------------------------------------|
| Week #7 Oct 16 | Part 3: Developing the Instrument: Pre-testing and Pilot testing the questionnaire  
Reading Assignment: Chapters 12 & 13- Aday Text and “How to Conduct Effective Pretests”  
http://www.fsnnetwork.org/sites/default/files/conducteffectivepretestenhv.pdf  
In class activity: Plan Pilot Test among Rutgers SPH students on the Newark Campus. Work on Draft 3 of class survey.  
Homework Assignment: Continue to Edit Draft 3 of Class survey and submit edits by Tuesday October 21st. |
| Week #8 Oct 23 | Sampling Plan, Study Design and Power Analysis  
Reading Assignment: Chapters 2, 6 and 7- Aday Text  
Important Dates:  
• IRB will be submitted on Oct 24th  
• Preletter sent Monday Nov 3  
• Round 1 of class survey Wed Nov 5  
• Round 2 of class survey Wed Nov 12  
• Round 3 of class survey Wed Nov 19  
• Study Data and Codebook available Thurs Nov 25  
Final Draft of the Class Survey completed in class today. Final survey items submitted by the end of class.  
Homework: Complete JMP tutorials  
http://www.jmp.com/academic/learning_library.shtml |
| Week #9 Oct 30 | Reading Assignment: Chapter 14-16 Aday Text  
Creating a Codebook  
Brief Look at JMP computer program  
In-class activities:  
1. Creating the Class Survey draft codebook –place in dropbox by Nov 1  
2. Review IRB modification request in class. |
| Week # 10 Nov 6 | Developing an Analysis plan and a Study timeline  
Reading Assignment: Chapters 2, 6 and 7- Aday Text  
Assignment IB due today  
In class activity:  
1. Create an Analysis Plan with research questions to be answered by each member of the class  
2. Students are assigned to answer questions |
| Week #11 Nov 13 | Human Subject Review  
Assignment II due today  
Discussion of assigned articles |
| Week #12 Nov 20 | Data Cleaning and Data Analysis I  
Cleaning and Analyzing Quantitative Survey Data  
Reading Assignment: Chapter 14-16 Aday Text |
<table>
<thead>
<tr>
<th>Week #13  Nov 25</th>
<th>Data Analysis II</th>
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<tbody>
<tr>
<td>Class held in MSB Classroom</td>
<td>Cleaning and Analyzing Quantitative Survey Data</td>
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<tr>
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<td>Distribution of class project data and codebook.</td>
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<tr>
<th>Week#14 Dec 4</th>
<th>Presenting Quantitative Survey Data-Assignment III due today</th>
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<tr>
<th>Week#15 Dec 18</th>
<th>Final examination (Short Answer Questions)</th>
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<td></td>
<td>Location: MSB F506b</td>
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<td>5:30-8:30pm</td>
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**School of Public Health Honor Code:** The School of Public Health Honor Code is found in the student bulletin (sph.rutgers.edu/academics/catalog/index.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.

**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.

**Some Important Days to Remember:**

<table>
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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>September 15, 2014</td>
<td>Last day to add a course to existing schedule. Last day to drop course w/o “W” grade if not withdrawing in full.</td>
</tr>
<tr>
<td>October 20, 2014</td>
<td>Last Day to withdraw from a course with a “W”</td>
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**Note:** It is SPH policy that students who stop attending their courses without processing a withdrawal and a drop form will receive a failing grade.

**Date:** August 20, 2014