Research Methods in Public Health  
PUHE-GE 2361 - Spring 2013  
Department of Nutrition, Food Studies and Public Health  
Mondays 4:55 – 6:35

Professor: Virginia W. Chang, MD, PhD  
Office Hours: TBA  
Email: vc43@nyu.edu

Overview of the Course:  
This course provides an introduction to the fundamentals of research study design and methods and data collection. It serves as an introduction to quantitative, qualitative, mixed method and participatory approaches to research, as well as ethical issues in conducting research. Through the mix of texts, articles from the public health literature and course work, students will build skills for conducting research and evaluation.

Course Objectives:  
At the end of the course, students should be able to:  
1. Identify the types of research questions and designs appropriate for studies in public health.  
2. Demonstrate knowledge of key concepts with sample selection and measurement.  
3. Demonstrate competence in constructing and thinking through basic analysis of surveys and semi-structured interviews.  
4. Demonstrate competence in conducting and analyzing focus groups.  
5. Evaluate the strengths and weaknesses of methods used in various research studies.  
6. Describe methods for designing research projects related to specific public health problems.

Course Format and Materials:  
This course draws upon two types of reading material: texts that focus on the conduct of research and scientific articles that are examples of different kinds of research. For each of the aspects of research methodology presented during lectures, students will be assigned reading materials that make use of those methods. It is essential that you come to class having completed the readings, ready to discuss them.

For some of the topics I will be posting discussion questions on the course website. When discussion questions are posted, students are expected to provide their responses to the questions as well as review and respond to each other’s responses. All responses should be completed by 6 pm, the Sunday before class.
Classroom Etiquette

- It is expected that everyone will attend class and show up on time. If you are not able to attend class, please advise me in advance. I will be circulating a sign in sheet to keep a record of class attendance.
- Cellphones will be turned off prior to class.
- It is expected that everyone will check their NYU email accounts and NYU Classes regularly for course updates, new materials and announcements.

Required Readings

- Articles from Peer Reviewed Journals. Unless noted, all the articles cited in the syllabus as required readings are available through the NYU libraries. = You will need to retrieve these articles through the ejournal system (under the Research tab of NYU Home), or use the edatabase. Personally, I find it easiest to use the databases PubMed or Web of Knowledge to retrieve articles, by entering the author’s name and a key word in the title, but do what you find easiest to do. If you have trouble finding an article, please let me know and I will do my best to email that article to you. If you have difficulty locating an article, please email me.

Optional Readings

I have a number of books and other materials about the structure and use of focus groups that I will make available to the class. In addition, for the literature review, you may want to consult:

Hart, C. Doing a Literature Review: Releasing the Social Science Research Imagination (free on Google books)

Assignments:

Students are required to complete the following assignments:

1. Online discussion questions: There are several discussion questions noted on the syllabus. Each student is responsible for posting a response by 6pm Sunday evening before class.

2. Literature Review. Each student will conduct a summary literature review of 10 public health articles. Resources for the literature review may include PubMed, PsychInfo, bibliographies from key papers, etc. You may want to investigate individual, social and environmental factors related to your topic, or you may choose to focus on specific interventions for your topic. The literature you select to review should help you think about questions you may wish to explore in the focus group and survey development assignments. (individual assignment)
3. **Survey Instrument First Draft and Pre-Test**: Each team will draft a survey instrument on a public health topic. Students will then each be responsible for administering the survey to 8 people and compile results from the pre-test. Each group will present their results and reflections to the class. The team will use feedback from their pretest to revise the instrument, and for description in the final project. (group assignment)

4. **Focus Group Moderator’s Guide**: Each team will develop a moderators’ guide for a 45 minute focus group investigating your topic. The issues explored in the focus group may flow from the survey results, but can go further, as the group determines. (group assignment)

5. **Final Project**: Each team will prepare a 10-14 page double spaced paper, outlining a research design using a survey and focus groups. The paper should identify a target population, the research question the study will investigate, the basic design it will employ, the sampling frame, the sampling plan and a brief discussion of the analytic plan for the data collected. The paper should include an appendix comprised of the moderator’s guide, survey instrument and tables describing the pre-test of the survey. Format for the final paper will be discussed in class. You will be asked, confidentially, to rate the participation of your group members (group assignment)

**Email policy with regard to assignments**: In general, I will not accept emailed assignments without prior approval.

**Grading:**

- Summary Literature Review: 15%
- Midterm: 20%
- Survey Instrument First Draft: 15%
- Focus Group Moderator Guide: 10%
- Final Group Project: 25%
- Class Participation and blackboard assignments: 15%
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<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
<th>Assignment Due</th>
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| January 28 | An Introduction to Research, sources of data, generating research questions, using the literature | a) Crosby, ch 1,2  
b) Millet  
c) Jones                                   | Post research interests and photo online                                      |
| February 4 | Introduction to Research Design, approaches to research and research paradigms, and ethics of research | a) Crosby, ch 3,4  
b) NYU Principal Investigator’s Guide to Human Subjects;  
c) Guidelines for the Conduct of Research Involving Human Subjects as the National Institutes for Health  
d) Belmont Report  
e) Buchanan  
f) Malone  
g) Onwujekwe  
h) Blustein | Online Discussion Questions                                                  |
| February 11| Observational Research Designs                                          | a) Crosby, ch 5  
b) Melchior  
c) Costello  
d) Burton  
e) Houston  
f) Dreyer                                      | Online Discussion Questions                                                  |
| February 18| NO CLASS – President’s Day                                              |                                                                              |                                                                              |
| February 25| Experimental Research Designs                                           | a) Crosby, ch 6  
b) Rosen  
c) Patton  
d) Gray                                                                         | Online Discussion Questions                                                  |
| March 4    | Measurement in Research Design                                          | a) Crosby ch 9, 10  
b) Deklyen  
c) Kenney  
d) Echeverria  
e) Krieger  
f) Sherbourne  
g) Li                                                                 | Literature Review Due                                                        |
<p>|            | IN-CLASS                                                                |                                                                              |                                                                              |</p>
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<th>Date</th>
<th>Topic</th>
<th>Authors/References</th>
<th>Notes</th>
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<tbody>
<tr>
<td>March 11</td>
<td>MIDTERM</td>
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<td>March 18</td>
<td>NO CLASS- Spring Break</td>
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<td>March 25</td>
<td>Survey Sampling and Survey Design</td>
<td>a) Crosby ch 11</td>
<td>Online Discussion Questions</td>
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<td>b) Zakrison</td>
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<td>d) Weir</td>
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<td>April 1</td>
<td>Analytic Techniques in Health Promotion and Disease Prevention</td>
<td>a) Crosby 12, 13</td>
<td>Online Discussion Questions</td>
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<td>b) Brodie</td>
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<td>c) Vlahov</td>
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<td>e) Galea</td>
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<td>April 8</td>
<td>In class presentations</td>
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<td>Survey Draft and Results/Reflection Due</td>
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<td>April 15</td>
<td>Qualitative Methods of Inquiry and Ethics</td>
<td>a) Crosby ch 7</td>
<td>Online Discussion Questions</td>
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<td>b) excerpt from Saks and Allsop</td>
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<td>c) Furst et al.</td>
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<td>d) Rubin and Rubin</td>
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<td>e) de Carvalho Mesquita Ayres</td>
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<td>April 22</td>
<td>Thinking through Focus Groups and Interviews</td>
<td>a) Feldman</td>
<td>Online Discussion Questions</td>
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<td>b) Vaughn, Schumm and Sinagub</td>
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<td>c) Shelley</td>
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<td>d) Hirsch</td>
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<td>April 29</td>
<td>Coding Focus Groups</td>
<td>a) Jackson</td>
<td>Moderator Guide Due</td>
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<td>b) Bigby</td>
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<td>c) focus group transcript to be handed out in previous week’s class for use in class!</td>
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<td>May 6</td>
<td>Program Evaluation I</td>
<td>a) Crosby, ch 8</td>
<td>Final Project Due</td>
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<td>b) Weitzman</td>
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<td>c) Curran</td>
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<td>May 13</td>
<td>Program Evaluation II</td>
<td>a) Mock</td>
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<td>b) Neuhauer</td>
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<td>c) Brown</td>
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PEER-REVIEWED ARTICLES AND ADDITIONAL READINGS

For January 28:


For February 4:


Guidelines for the conduct of Research Involving Human Subjects at the National Institutes of Health (posted)

The Belmont Report (link posted)

NYU Principal Investigator’s Guide to Human Subjects (link posted)

For February 11:


**For February 25:**


**For March 4:**


For March 25:


For April 1:


For April 15:


For April 22:


For April 29:


For May 6:


For May 13:


Guide for Critiquing a Research Article

1. What is the research question?
2. What is the research design?
3. How are the key variables measured? How did they collect their data?
4. Who is the sample? How was the sample chosen?
5. What are the results?
6. What limitations do the authors identify, if any?
7. What are the key points in the discussion?
8. Given what else you have read regarding this topic, what is interesting about this article for your research project?