



Mel and Enid Zuckerman  
College of Public Health

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## SYLLABUS

### CPH 628: Public Health Research and Evaluation Fall 2010 (3 units)

**Mondays, 9:00-11:50am**  
**Location: A116**

**Instructor:**

John E. Ehiri, PhD, MPH, MSc (Econ)  
Professor & Director,  
Division of Health Promotion Sciences

**Contact Information**

1295 N. Martin Avenue  
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Office Hours: By appointment (contact instructor by e-mail)

**Catalog Description:** This course provides a theoretical introduction and applied experience with methods for undertaking public health research and program evaluation. Activities will involve designing and presenting both a research and evaluation plan using standards set by federal funding agencies and practical problem solving in applying research and evaluation methods in the field.

**Course Overview:** Public health professionals require skills to identify and delineate problems that face communities in which they work, and the ways to solve them. Often, this requires them to conduct small-scale investigations of their own, either as managers working on specific health projects, or as consultants hired to provide technical assistance. To help you to develop the skills to effectively perform this function, this course provides support for you to work through the process of considering in depth, a specific health problem, and formulating a scientifically valid and locally relevant investigation around it. You will receive structured guidance on how to conduct preliminary assessment of health needs, how to develop project objectives that are "SMART" (specific, measurable, achievable, realistic, and time-framed), how to develop project hypotheses and implementation design (including how to develop conceptual and theoretical frameworks), how to collect and analyze data (quantitative and qualitative), how to develop monitoring and evaluation plans (including how to develop project logic models), how to ensure project sustainability, how to develop and justify project budgets, and procedures for ethical involvement of participants in research.

It is expected that at the end of the course, you will have acquired skills in describing the rationale, objectives, and methods of investigation, implementation, and evaluation of projects in

community health. Project design and implementation is usually a group effort. For this reason, you will work both independently and in groups.

**Learning outcomes** [<http://ssph.fiu.edu/docs/DomainsandCompetenciesOnly.pdf>]

After completing this course, you should be able to:

<b>Outcome</b>	<b>Related Competencies<sup>1</sup></b>
Describe the relationship between research and program evaluation.	E.5; E.7 E.8; K.6
Collect and utilize primary and secondary data in research projects and program evaluations.	E.2; E.3; E.4; E.6 J.4; J.6; K.1; L.4
Differentiate among goals, measurable objectives, related activities, and expected outcomes for a public health program.	K.5
Identify different types of study design (including observational, quasi--experimental and experimental designs) and threats to internal and external validity.	A.7; A.8; E.5; G.6 J.2; K.7; L.7;
Identify the necessary components of public health research and evaluation, in terms of sampling techniques, determination of sample size, selection or development of measurement/assessment instruments, methods of analysis and interpretation.	D5; E.8; H.9 K2; K.3; K.9
Develop research hypothesis, specific aims, and objectives as well as conceptual and theoretical frameworks for a study.	D5; E.1; E.10; F.4 G.9; K.5; K.L.6
Differentiate between qualitative and quantitative evaluation methods in relation to their strengths, limitations, and appropriate uses, and emphases on reliability and validity.	K.7
Differentiate the purposes of formative, process, and outcome evaluation.	K.6
Develop a design for a research or evaluation project.	D5; E.8; E.9; F.6; G.5; G.10 H.9; J.3; J.8; J.10; K.4; K.8
Prepare a program budget with justification.	K.8
In collaboration with others, prioritize individual, organizational, and community concerns and resources for public health programs.	K.9

**Course Requisites:** Enrollment in the masters or doctoral program in public health, or consent of instructor.

### Required Text

There is no required textbook for this course. The instructor has selected essential reading lists for each week. All required reading materials will be available to you at no cost. Web links and/or electronic copies of the required readings will be posted on the course D2L site.

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## Recommended Readings

- Bertrand JT (2005) Evaluating health communication programs. *Drum Beat*, Issue 302. June.
- Bertrand JT, Escudero G (2004) Compendium of indicators for evaluating reproductive health programs. Chapel Hill, NC: Carolina Population Center, MEASURE Evaluation Project. Pp. 1-14.
- Centers for Disease Control and Prevention (2009) Social marketing for nutrition and physical activity. Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. Atlanta, Georgia. Retrieved from <http://www.cdc.gov/nccdphp/Dnnpa/socialmarketing/training/index.htm>.
- Centers for Disease Control and Prevention (2005) Introduction to program evaluation for public health programs: a self-study guide <http://www.cdc.gov/eval/evalguide.pdf> and <http://www.cdc.gov/eval/index.htm>
- Earp JA, Ennett ST (1991) Conceptual models for health education research and practice. *Health Educ Res*, 6:163-171.
- Habicht JP, Victora CG, Vaughn JP (1999) Evaluation designs for adequacy, plausibility and probability of public health programme performance and impact. *Int J Epidemiol*, 28:10-18.
- Health Canada (2010). Social marketing. Retrieved from [http://www.phac-aspc.gc.ca/canada/regions/ab-nwt-tno/resources-ressources/documents/e\\_socialmarketing\\_toolkit.pdf](http://www.phac-aspc.gc.ca/canada/regions/ab-nwt-tno/resources-ressources/documents/e_socialmarketing_toolkit.pdf).
- Debus M (1998) Handbook for excellence in focus group research. Washington, DC: Academy for Educational Development. Retrieved from [http://www.globalhealthcommunication.org/tool\\_docs/60/handbook\\_for\\_excellence\\_in\\_focus\\_group\\_research\\_full\\_text.pdf](http://www.globalhealthcommunication.org/tool_docs/60/handbook_for_excellence_in_focus_group_research_full_text.pdf)
- Saunders RP, Evans MH, Praphul J (2005) Developing a process-evaluation plan for assessing health promotion program implementation: a how-to guide. *Health Promotion Practice*, 6:134-147.
- Shain RN, Piper JM, et al. (1999) A randomized controlled trial of a behavioral intervention to prevent sexually transmitted disease among minority women. *New England Journal of Medicine*, 340:93-100.
- The Communication Initiative Network (2010) Planning models. Retrieved from: <http://www.comminet.com/en/section5/36/36%2C12>
- Teufel-Shone, N. I., Siyuja, T., Watahomigie, H. J, Irwin, S. (2006). Community-Based Participatory Research: Conducting a Formative Assessment of Factors that Influence Youth Wellness in the Hualapai Community. *AJPH* 96: 1623-1628. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1551937/pdf/0961623.pdf>

- Trochim WMK (2008) Social research methods: Evaluation research. Retrieved from <http://www.socialresearchmethods.net/kb/evaluation.php>.
- Viadro CI (1997) Designing a process evaluation for a comprehensive breast cancer screening intervention: Challenges and opportunities. *Evaluation and Program Planning*, 20:237-249.
- Westat JF (2002) The 2002 User-friendly handbook for project evaluation. Division of Research, Evaluation and Communication, National Science Foundation. Retrieved from <http://www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf>.
- W.K. Kellogg Foundation (1998) Evaluation handbook. Retrieved from [http://ww2.wkkf.org/DesktopModules/WKF.00\\_DmaSupport/ViewDoc.aspx?fld=PDFFile&CID=281&ListID=28&ItemID=2810770&LanguageID=0](http://ww2.wkkf.org/DesktopModules/WKF.00_DmaSupport/ViewDoc.aspx?fld=PDFFile&CID=281&ListID=28&ItemID=2810770&LanguageID=0).

### Course Evaluation

- Individual Project (continuous assessment): 25%
- Individual Project (final submission): 15%
- Group Project (continuous assessment): 25%
- Group Project (final submission): 15%
- Group Participation: 10%
- Final Group Presentation: 10%

Each assignment will be submitted in word document format to the designated drop-box on the D2L course platform <http://d2l.arizona.edu>. Assignments are to be submitted before 11:59pm on the due date. To avoid confusion and to ensure that your assignment will be graded, please save your assignment with your first and last name (e.g., "*MikeMoore.doc*") and for group assignment, with your group name as the file name (e.g., "*group#1letterofintent.doc*"). It is your responsibility to ensure that the instructor receives your assignments by the due date. Problems with email or D2L will not be accepted as sufficient reason for late or non-submission of required assignments.

For your individual and group assignments, you will identify a given public health problem based upon which you will undertake a series of graded exercises that will lead to the development of a proposal for conducting baseline assessment and prioritization of need for an intervention. You will develop structured program goals and objectives, intervention design, implementation, and evaluation plan. There is no end of course examination. Continuous assessment will be based on completion and submission of the various sections of the project design, implementation and evaluation plan. For your individual evaluation, the final project plan should be 10 single-spaced pages (excluding references and appendices). Font size is Times New Roman 12. The group project plan should be 15 single-spaced pages (excluding references and appendices). Font size is Times New Roman 12. Grades will be awarded, based on the scientific merit, overall quality, and completeness of submitted work. Presentation of work in APA referencing format is required <http://owl.english.purdue.edu/owl/resource/560/01/>.

The schedule of assignments is as shown below.

Assignment	Type	Points %	Due date
Letter of intent	Group	5	Sept 3
Letter of intent	Individual	5	Sept 10
Background, specific aims and hypotheses	Group	5	Sept 20
Background, specific aims and hypotheses	Individual	5	Sept 24
*In-class power-point presentation by course participants: Title, specific aims, hypotheses, background& significance, design & methods, implementation, ethical issues and sustainability	Group	5	Oct 11 [First hour of class]
First draft proposal: Title, specific aims, background & significance, hypotheses, design & methods of implementation.	Group	10	Oct 25
First draft proposal: title, specific aims, background & significance, hypotheses, design & methods of implementation.	Individual	15	Oct 29
Second draft proposal: Title, specific aims, hypotheses, background & significance, design & methods, implementation (including evaluation plan, budget, ethical considerations, and sustainability)	Group	5	Nov 23
Second draft proposal: Title, specific aims, hypotheses, background & significance, design & methods, implementation (including evaluation plan, budget, ethical considerations, and sustainability)	Individual	5	Dec 3
Submission of final paper	Group	15	Dec 10
Submission of final paper	Individual	15	Dec 15
Group participation		10	
Total		100	

*\*This will be a 15-minute power-point presentation in which each group will highlight and explain their project's specific aims, hypotheses, background & significance, design and methods, implementation, evaluation strategy, ethical issues, anticipated challenges, and implications of their work for policy and practice. Group members are expected to refine their project's approach based on feedback from the instructor and colleagues.*

### Grading Scale

A = 90-100%

B = 80-89%

C = 70-79%  
D = 60-69  
E = 59% or less

**Policy on Late Assignments:** It is essential that assignments are submitted by the time and date specified. In extenuating circumstances, the instructor may agree to accept a late assignment. If possible, such arrangements should be made with the instructor in advance. Late assignments will be penalized by deduction of two percent of the total points for each day the assignment is late.

**Class Attendance:** Regular class attendance is mandatory for this course. The instructor will record attendance at the beginning of each class. There may be times when you are unable to attend class for some unavoidable reasons. You can miss up to three classes over the entire semester without incurring any penalty. After the third absence, the instructor will deduct a letter grade off your final grade as penalty for insufficient class attendance. Please note that this is a non-negotiable rule for this course. You may choose not to take this course if you anticipate the need to miss more than three classes. Course participants who enter the classroom after the class roll has been taken will be counted as having missed class for that day.

**Classroom Etiquette:** Use of laptop computers and cellular phones in the class is not permitted. You will receive a .5% deduction from your overall course grade for each time your cellular phone rings during a classroom activity (including lectures, computer lab sessions, video presentations, or discussions). A .5% penalty is also imposed each time you are observed using your laptop computer in the class.

**Disability Accommodation:** If you anticipate issues related to the format or requirements of this course, please meet with me. I would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you register with Disability Resources (621-3268; drc.arizona.edu) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations. The official policy can be found at: <http://catalog.arizona.edu/2009-10/policies/disability.htm>

**Academic Integrity:** Course participants are responsible for upholding the University of Arizona Code of Academic Integrity, available through the office of the Dean of Students and online at: <http://deanofstudents.arizona.edu/codeofacademicintegrity>.

**Classroom Behavior:** Course participants are expected to behave respectfully during class. If you arrive late or must leave early, please take a seat near the door to minimize disruption. Please turn off cell phones and pagers unless there is great need (e.g., if you are a practicing physician on call or a family crisis is unfolding). If you must allow for such contact, set cell phones and pagers to vibrate if at all possible, and sit near an exit. Course participants are expected to be familiar with the UA Policy on Disruptive Behavior in an Instructional Setting found at <http://web.arizona.edu/~policy/disruptive.pdf> and the Policy on Threatening Behavior found at <http://web.arizona.edu/~policy/threatening.pdf>

**Grievance Policy:** Should a course participant feel that he or she has been treated unfairly, there are a number of resources available. With few exceptions, course participants should first attempt to resolve difficulties informally by bringing those concerns directly to the person responsible for the action, or with the course participant's advisor, the department head, or the

immediate supervisor of the person responsible for the action. If the problem cannot be resolved informally, the course participant may file a formal grievance using the Graduate College Grievance Policy found at: <http://grad.arizona.edu/academics/policies/academic-policies/grievance-policy>

**Grade Appeal Policy:** <http://catalog.arizona.edu/2009-10/policies/gradappeal.htm>

**Syllabus Changes:** Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate.

**Plagiarism:** What counts as plagiarism?

- Copying and pasting information from a web site or another source, and then revising it so that it sounds like your original idea.
- Doing an assignment/essay/take home test with a friend and then handing in separate assignments that contain the same ideas, language, phrases, etc.
- Quoting a passage without quotation marks or citations, so that it looks like your own.
- Paraphrasing a passage without citing it, so that it looks like your own.
- Hiring another person to do your work for you, or purchasing a paper through any of the on- or off-line sources.



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**CPH 628: Public Health Research and Evaluation  
Fall 2010**

**Weekly schedule**

Week 1 [August 23]	Introduction & Course Overview
<b>Objective</b>	The week's lecture will provide an overview of the course, clarify course rules and expectations, and introduce you to principles and issues in public health intervention research and evaluation.
<b>Required Readings</b>	<ol style="list-style-type: none"> <li>1. Trochim WMK (2008) Social Research Methods: Knowledge Base. <b>Read:</b> <a href="#">Foundations</a> <a href="#">Philosophy of Research</a> <a href="#">Conceptualizing</a> <a href="#">Evaluation Research</a></li> <li>2. Craig P, Dieppe P McIntyre S et al (2004) Developing and evaluating complex interventions: the new Medical Research Council guidance. BMJ 2008;337:a1655. Retrieved from <a href="http://www.bmj.com/cgi/section_pdf/337/sep29_1/a1655.pdf">http://www.bmj.com/cgi/section_pdf/337/sep29_1/a1655.pdf</a>.</li> <li>3. Cecil G Sheps Center for Health Services Research (2009) Program planning and monitoring self-instructional manuals. Retrieved from <a href="http://www.shepscenter.unc.edu/data/peoples/index.html">http://www.shepscenter.unc.edu/data/peoples/index.html</a> .</li> </ol>
<b>Further Readings</b>	<ol style="list-style-type: none"> <li>1. Saunders RP, Evans MH, Praphul J (2005) Developing a process-evaluation plan for assessing health promotion program implementation: a how-to guide. Health Promotion Practice, 6:134-147. Retrieved from <a href="http://hpp.sagepub.com/cgi/reprint/6/2/134">http://hpp.sagepub.com/cgi/reprint/6/2/134</a>.</li> </ol>



Week 2 [August 30]	Needs Assessment and Priority Settings in Public Health
<b>Objective</b>	This week's lecture will introduce you to a very fundamental element of project planning – assessing population health needs and ensuring that project initiation, planning and implementation reflect the needs and aspirations of beneficiaries. You will be introduced to a variety of approaches for conducting population health needs assessment in high and low income countries. Advantages and limitations of these various approaches will be addressed.
<b>Required Readings</b>	<ol style="list-style-type: none"> <li>1. Hill Z, Manu A, Tawiah-Agyemang C (2008) How did formative research inform the development of a home-based neonatal care intervention in rural Ghana? <i>J Perinatol.</i>, Suppl 2:S38-45.</li> <li>2. McBride KR, Goldsworthy RC, Fortenberry JD (2009) Formative design and evaluation of patient-delivered partner therapy informational materials and packaging. <i>Sex Transm Infect.</i>, 85:2; 150-5.</li> <li>3. Teufel-Shone, N. I., Siyuja, T., Watahomigie, H. J, Irwin, S. (2006). Community-Based Participatory Research: Conducting a Formative Assessment of Factors that Influence Youth Wellness in the Hualapai Community. <i>AJPH</i> 96: 1623-1628 <a href="#">[Abstract]</a> <a href="#">[Full text]</a></li> <li>4. Weir SS, Morroni C, Coetzee N, Spencer J, Boerma JT (2002) A pilot study of a rapid assessment method to identify places for AIDS prevention in Cape Town, South Africa. <i>Sex Transm Infect</i>, 78 (Suppl 1):i106-i113.</li> <li>5. Wright J, Walley J (1998) Assessing health needs in developing countries. <i>British Medical Journal</i> 316:7147; 1819-23. Retrieved from <a href="http://www.bmj.com/cgi/content/full/316/7147/1819">http://www.bmj.com/cgi/content/full/316/7147/1819</a>.</li> </ol>
<b>Further Readings</b>	<ol style="list-style-type: none"> <li>1. University of Kansas (2010). The Community Tool Box. Part B. Community Assessment, Agenda Setting, and Choice of Broad Strategies (Chapters 3 - 5). Retrieved from <a href="http://ctb.ku.edu/en/tablecontents/chapter_1003.htm">http://ctb.ku.edu/en/tablecontents/chapter_1003.htm</a>.</li> <li>2. Department for International Development (2003) Tools for development: a handbook for those engaged in development activity. London: Department for International Development (DfID). Version 15. Retrieved from <a href="http://www.dfid.gov.uk/Documents/publications/toolsfordevelopment.pdf">http://www.dfid.gov.uk/Documents/publications/toolsfordevelopment.pdf</a> Chapter 2 – Stakeholder analysis; Chapter 3 - Problem and situation analysis.</li> <li>3. Peace Corps (2007) Participatory analysis for community action (PACA) training manual. Washington DC: Peace Corps, Office of Overseas Programming and Training Support, Information Collection and Exchange. Retrieved from <a href="http://multimedia.peacecorps.gov/multimedia/pdf/library/PACA-2007.pdf">http://multimedia.peacecorps.gov/multimedia/pdf/library/PACA-2007.pdf</a></li> </ol>

<b>Week 3 [Sept. 6]</b>	<b>Labor Day [No Class]</b>
<b>Objective</b>	
<b>Required Readings</b>	
<b>Further Readings</b>	
<b>Assignment</b>	

Week 4 [Sept. 13]	Defining Project Goals, Objectives, Indicators & Hypotheses
<b>Objective</b>	<p>This week's lecture will discuss the importance of ensuring that project planning is based on well defined aims, objectives, and hypotheses. You will be presented with practical examples and guidelines for crafting project objectives that are specific, measurable, achievable, realistic and time-framed (SMART). The link between project objectives and evaluation indicators will be addressed.</p>
<b>Required Readings</b>	<ol style="list-style-type: none"> <li data-bbox="526 506 1433 751">1. Bertrand JT, Escudero G (2004) Compendium of indicators for evaluating reproductive health programs. Chapel Hill, NC: Carolina Population Center, MEASURE Evaluation Project. Pp. 1-14. Retrieved from: <a href="http://www.k4health.org/sites/default/files/PNACR079_1.pdf">http://www.k4health.org/sites/default/files/PNACR079_1.pdf</a>. <b><i>This is a 210 page document that details indicators for evaluation measurement in various areas of public health. You are not required to read and memorize these. Review and identify examples that may be relevant to your proposed project.</i></b></li> <li data-bbox="526 789 1433 846">2. March of Dimes (2004) "SMART" objectives. Retrieved from <a href="http://www.marchofdimes.com/files/Hi_SMART_objectives.pdf">http://www.marchofdimes.com/files/Hi_SMART_objectives.pdf</a>.</li> <li data-bbox="526 884 1433 1003">3. Morrison M (2009) How to write SMART objectives and SMARTer objectives. Retrieved from <a href="http://www.rapidbi.com/created/WriteSMARTObjectives.html">http://www.rapidbi.com/created/WriteSMARTObjectives.html</a>. <b><i>Review the additional sources cited on this web site.</i></b></li> <li data-bbox="526 1041 1433 1098">4. Scott S (2003) Developing measurable objectives. Retrieved from <a href="http://www.ncartsforhealth.org/developingmeasurableobjectives.html">http://www.ncartsforhealth.org/developingmeasurableobjectives.html</a>.</li> </ol>

Week 5 [Sept. 20]	Project Conceptual Model
<b>Objective</b>	The conceptual framework represents a picture of how an effort or initiative is supposed to work. It is an explicit visual statement about the activities that will bring about change and the results one would expect to see for the community and its people as a result of the project's implementation. This week's lecture will discuss the importance and methods of constructing and interpreting project conceptual models.
<b>Required Readings</b>	<ol style="list-style-type: none"> <li>1. Earp JA, Ennett ST (1991) Conceptual models for health education research and practice. Health Educ Res, 6:163-171. Retrieved from <a href="http://her.oxfordjournals.org/cgi/reprint/6/2/163">http://her.oxfordjournals.org/cgi/reprint/6/2/163</a>.</li> <li>2. Cline D (2005) Logical structure, theoretical framework. Retrieved from: <a href="http://education.astate.edu/cee/dcline/Guide/Framework.html">http://education.astate.edu/cee/dcline/Guide/Framework.html</a> Center for Excellence in Education, Arkansas State University..</li> <li>3. Bertrand J (2006) Developing a conceptual framework, and introduction to formative research. Johns Hopkins University. Retrieved from <a href="http://ocw.jhsph.edu/courses/fundamentalsprogramevaluation/PDFs/Lecture4.pdf">http://ocw.jhsph.edu/courses/fundamentalsprogramevaluation/PDFs/Lecture4.pdf</a>.</li> <li>4. Family Health International (2010) Women's voices, women's lives: the impact of family planning: conceptual framework. Retrieved from <a href="http://www.fhi.org/en/RH/Pubs/wsp/synthesis/ConceptFrame.htm">http://www.fhi.org/en/RH/Pubs/wsp/synthesis/ConceptFrame.htm</a>.</li> </ol>
<b>Further Readings</b>	<ol style="list-style-type: none"> <li>1. World Health Organization (2007) A conceptual framework for action on the social determinants of health. Commission on Social Determinants of Health. Geneva: World Health Organization. Retrieved from <a href="http://www.who.int/social_determinants/resources/csdh_framework_action_05_07.pdf">http://www.who.int/social_determinants/resources/csdh_framework_action_05_07.pdf</a>.</li> </ol>

Week 6 [Sept. 27]	Project Theoretical Model and Intervention Mapping
<b>Objective</b>	Theory helps program planners to understand how individuals, groups, and organizations behave and change. It helps in articulating assumptions and hypotheses concerning our strategies, and targets of intervention. This knowledge can be used to enhance the effectiveness of interventions. This week's lecture will discuss the importance of theory in project planning, implementation, and evaluation. It will discuss specific theoretical constructs, provide examples of application to project planning, and provide a guide for theory selection and integration in project planning.
<b>Required Readings</b>	<ol style="list-style-type: none"> <li>1. Kim YH (2005) Adolescents' smoking behavior and its relationships with psychological constructs based on trans-theoretical model: A cross-sectional survey. <i>International Journal of Nursing Studies</i>; 43:4;439-446.</li> <li>2. Lytle LA, Perry CL (2001) Applying research and theory in program planning: An example from a nutrition education intervention. <i>Health Promotion Practice</i>, Jan 2001; 2: 68-80.</li> <li>3. National Cancer Institute (2005) Theory at a glance: a guide for health promotion practice. US Bethesda, MD: Department of Health and Human Services, National Institutes of Health. Retrieved from <a href="http://www.nci.nih.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf">http://www.nci.nih.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf</a>.</li> <li>4. Townsend M et al (2003) Using a theory-driven approach to design a professional development workshop. <i>Journal of Nutrition Education and Behavior</i> 35: 312-318.</li> <li>5. Pérez-Rodrigo C, Wind M, Hildonen C et al (2005) The pro children intervention: applying the intervention mapping protocol to develop a school-based fruit and vegetable promotion programme. <i>Ann Nutr Metab.</i> 49:4; 267-77.</li> </ol>
<b>Further Readings</b>	<ol style="list-style-type: none"> <li>1. Davies SL, Harrington K, Franklin FA, Shewchuk RM, Feese ML, Windle M. (2005) Hi5+: systematic development of a family intervention to increase fruit and vegetable intake. <i>Health Promot Pract.</i> 6:2; 190-201.</li> <li>2. Harrington KF, Franklin FA, Davies SL, Shewchuk RM, Binns MB (2005) Implementation of a family intervention to increase fruit and vegetable intake: the Hi5+ experience. <i>Health Promot Pract.</i> 6:2; 180-9.</li> <li>3. Wyker BA, Davison KK (2010) Behavioral change theories can inform the prediction of young adults' adoption of a plant-based diet. <i>J Nutr Educ Behav.</i> 42:3; 168-77.</li> </ol>

Week 7 [Oct. 4]	Design and Method – Quantitative
<b>Objective</b>	Building on discussions related to health needs assessment and thinking ahead about evaluation methods and indicators, this week's lecture will discuss the various designs and methods that are available for structuring the orientation of population based health projects. Discussion and examples will be presented in relation to qualitative, quantitative, and mixed methods designs.
<b>Required Readings</b>	Trochim WMK (2008) Social research methods: Knowledge base. <b>Read:</b> <ol style="list-style-type: none"> <li>1. Sampling: <a href="http://www.socialresearchmethods.net/kb/sampling.php">http://www.socialresearchmethods.net/kb/sampling.php</a></li> <li>2. Measurement: <a href="http://www.socialresearchmethods.net/kb/measure.php">http://www.socialresearchmethods.net/kb/measure.php</a></li> <li>3. Design: <a href="http://www.socialresearchmethods.net/kb/design.php">http://www.socialresearchmethods.net/kb/design.php</a></li> </ol>
<b>Further Readings</b>	Here are some sample size calculation software applications: Epi Info Statcalc: <a href="http://www.cdc.gov/epiinfo/">http://www.cdc.gov/epiinfo/</a> <ul style="list-style-type: none"> <li>• RoaSoft sample Size calculator: <a href="http://www.raosoft.com/samplesize.html">http://www.raosoft.com/samplesize.html</a></li> <li>• Creative Research Systems: <a href="http://www.surveysystem.com/sscalc.htm">http://www.surveysystem.com/sscalc.htm</a></li> <li>• Macorr sample size calculator: <a href="http://www.macorr.com/ss_calculator.htm">http://www.macorr.com/ss_calculator.htm</a></li> <li>• Decision Support Systems: <a href="http://www.dssresearch.com/toolkit/sscalc/size.asp">http://www.dssresearch.com/toolkit/sscalc/size.asp</a></li> <li>• PS Power and sample Calculator version 3.0 (2009) by William Dupont: <a href="http://biostat.mc.vanderbilt.edu/wiki/bin/view/Main/PowerSampleSize">http://biostat.mc.vanderbilt.edu/wiki/bin/view/Main/PowerSampleSize</a></li> </ul>

Week 8 [Oct. 11]	Design and Method – Quantitative (Questionnaire Design)
<b>Objective</b>	This week's lecture will discuss strategies for designing effective questionnaires for use in primary data collection.
<b>Required Readings</b>	<ol style="list-style-type: none"> <li>1. McColl E, Jacoby A, Thomas L (2001) Design of questionnaires: A review of best practice applicable to surveys of health services staff and patients. <i>Health Technology Assessment</i> 5:31. Retrieved from <a href="http://www.hta.ac.uk/pdfexecs/summ531.pdf">http://www.hta.ac.uk/pdfexecs/summ531.pdf</a>.</li> <li>2. Krosnick JA, Holbrook A L, Berent MK et al (2002). The impact of "No Opinion" response options on data quality: Non-attitude reduction or an invitation to satisfice? <i>Public Opinion Quarterly</i>, 66, 371–403.</li> <li>3. Saris, W. E., Krosnick, J. A., &amp; Schaeffer, E. M. (2010). Comparing questions with Agree/Disagree response options to questions with item-specific response options. <i>Survey Research Methods</i> 4:1; 61-79.</li> <li>4. Sanchez ME (1992) Effects of questionnaire design on the quality of survey data. <i>Public opinion quarterly</i> 56:206-217.</li> </ol>
<b>Further Readings</b>	<ol style="list-style-type: none"> <li>1. Bradburn N, Sudman S, Wansink B (2004) <i>Asking Questions: the definitive Guide to questionnaire design – for market research, political polls, and social and health questionnaires</i>. San Francisco: Jossey Bass.</li> <li>2. Schuman, H., &amp; Presser, S. (1981). <i>Questions and answers in attitude surveys</i>. New York: Academic Press.</li> <li>3. Allen a. Mitchell, Linda B. Cottler and Samuel Shapiro (1986) Effect of questionnaire design on recall of drug exposure in pregnancy. <i>American Journal of Epidemiology</i> Vol. 123, No. 4: 670-676.</li> <li>4. CR Jenkins, DA Dillman (1995) Towards a theory of self-administered questionnaire design: In: Lyberg L, Biemer P, Collins E et al (eds.) <i>Survey Measurement and Process Quality</i>. New York: Wiley-Interscience.</li> <li>5. Bagozzi RP (1994) <i>Measurement in marketing research: basic principles of questionnaire design</i>.</li> </ol>

Week 9 [Oct. 18]	Design and Method – Qualitative & Mixed Method Approach
<b>Objective</b>	This week's lecture will introduce you to the benefits of triangulation in public health research by presenting the case for application of mixed methods approaches. Examples of research questions that merit the application of mixed methods approaches will be presented and issues in practical application of mixed methods in public health research will be discussed.
<b>Required Readings</b>	<ol style="list-style-type: none"> <li>1. Lewin S, Glenton C, Oxman AD (2009) Use of qualitative methods alongside randomised controlled trials of complex healthcare interventions: methodological study. <i>BMJ</i> 339:b3496. Retrieved from <a href="http://www.bmj.com/cgi/reprint/339/sep10_1/b3496">http://www.bmj.com/cgi/reprint/339/sep10_1/b3496</a>.</li> <li>2. Creswell, J.W. Fetters, W.D. &amp; Ivankova, N.V. (2004). Designing a mixed methods study in primary care. <i>Annals of Family Medicine</i> 2:7-12.</li> <li>3. O'Cathain A, Murphy E, Nicholl J (2007) Why, and how, mixed methods research is undertaken in health services research in England: a mixed methods study. <i>BMC Health Serv Res.</i> 14; 7:85.</li> <li>4. Gibbs L, Kealy M, Willis K et al. (2007) What have sampling and data collection got to do with good qualitative research? <i>Aust N Z J Public Health</i>; 31(6):540-4.</li> <li>5. Devers KJ (1999) How will we know "good" qualitative research when we see it? Beginning the dialogue in health services research. <i>Health Serv Res.</i>; 34(5 Pt 2):1153-88.</li> </ol>
<b>Further Readings</b>	<p>Barg FK, Huss-Ashmore R, Wittink MN et al. (2006). A mixed-methods approach to understanding loneliness and depression in older adults. <i>J. Gerontol. B. Psychol. Sci. Soc. Sci.</i>, 61(6): S329-S339.</p> <p>Johnson B, Onwuegbuzie AJ (2004) Mixed methods research: A research paradigm whose time has come. <i>Educational Researcher</i> 33:7; 14-26.</p>



Week 9 [Oct. 25]	Qualitative Data Analysis
<b>Objective</b>	This week's lecture will introduce you to methods of analyzing qualitative data. It will involve computer lab demonstration of a computer-based qualitative data analysis software application.
<b>Required Readings</b>	<p>Ratcliff D (Undated) Methods of data analysis in qualitative research. Retrieved from <a href="http://qualitative-research.ratcliffs.net/15methods.pdf">http://qualitative-research.ratcliffs.net/15methods.pdf</a></p> <p>Seidel JV (1998a). Qualitative data analysis. Retrieved from <a href="ftp://ftp.qualisresearch.com/pub/qda.pdf">ftp://ftp.qualisresearch.com/pub/qda.pdf</a></p> <p>Seidel J (1998b) Qualitative data analysis: The ethnograph v5 Manual. Retrieved from <a href="http://www.qualisresearch.com/">http://www.qualisresearch.com/</a></p> <p>Taylor-Powell E, Renner M. (2003) Analyzing qualitative data. Retrieved from <a href="http://learningstore.uwex.edu/assets/pdfs/g3658-12.pdf">http://learningstore.uwex.edu/assets/pdfs/g3658-12.pdf</a></p>
<b>Further Readings</b>	<p>Green J, Willis K, Hughes E et al. (2007) Generating best evidence from qualitative research: the role of data analysis. Aust N Z J Public Health; 31(6):545-50.</p> <p>Stange KC, Crabtree BF, Miller WL (2006) Publishing multi-method research. Ann. Fam. Med; 4:4; 292–294.</p>

Week 10 [Nov 1]	Project Monitoring and Evaluation
<b>Objective</b>	This week's lecture will discuss various evaluation designs and methods, and their application to project planning, implementation, and evaluation in public health interventions. Various evaluation models will be presented along with their respective strengths and limitations.
<b>Required Readings</b>	<p>Habicht JP, Victora CG, Vaughn JP (1999) Evaluation designs for adequacy, plausibility and probability of public health programme performance and impact. <i>Int J Epidemiol</i>, 28:10-18.</p> <p>Patirakia EI, Papathanassoglou EDE, Tafasb C et al. (2006) A randomized controlled trial of an educational intervention on Hellenic nursing staff's knowledge and attitudes on cancer pain management. <i>European Journal of Oncology Nursing</i> 10:337-352.</p> <p>Saunders RP, Evans MH, Praphul J (2005) Developing a process-evaluation plan for assessing health promotion program implementation: a how-to guide. <i>Health Promotion Practice</i>, 6:134-147.</p>
<b>Further Readings</b>	<p>Westat JF (2002) The 2002 User-friendly handbook for project evaluation. Division of Research, Evaluation and Communication, National Science Foundation. Retrieved from:  <a href="http://www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf">http://www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf</a>.</p>

Week 11 [Nov. 8]	Project Monitoring and Evaluation (The Logical Framework Approach)
<b>Objective</b>	This week's lecture will provide skills in how to use project logic models in conducting project planning and evaluation activities. Examples of logic models used by various national and international health and development agencies will be reviewed.
<b>Required Readings</b>	<p>Centers for Disease Control and Prevention CDC Evaluation Working Group: Logic Model Resources Retrieved from <a href="http://www.cdc.gov/eval/resources.htm#logic%20model">http://www.cdc.gov/eval/resources.htm#logic%20model</a>.</p> <p>Department for International Development (2003) Tools for development: a handbook for those engaged in development activity. London: Department for International Development (DfID). Version 15. Retrieved from <a href="http://www.dfid.gov.uk/Documents/publications/toolsfordevelopment.pdf">http://www.dfid.gov.uk/Documents/publications/toolsfordevelopment.pdf</a> Chapter 5 Logical Framework.</p> <p>European Commission (2004) Aids delivery methods. Volume 1: The project cycle management guideline. Part 2. The Logical Framework Approach. Pp. 57-94.</p> <p>W.K. Kellogg Foundation (2004) Logic model handbook. Retrieved from <a href="http://ww2.wkkf.org/DesktopModules/WKF.00_DmaSupport/ViewDoc.aspx?fld=PDFFile&amp;CID=281&amp;ListID=28&amp;ItemID=2813669&amp;LanguageID=0">http://ww2.wkkf.org/DesktopModules/WKF.00_DmaSupport/ViewDoc.aspx?fld=PDFFile&amp;CID=281&amp;ListID=28&amp;ItemID=2813669&amp;LanguageID=0</a>.</p>
<b>Further Readings</b>	W.K. Kellogg Foundation (1998) Evaluation handbook. Retrieved from <a href="http://www.ojp.usdoj.gov/BJA/evaluation/links/WK-Kellogg-Foundation.pdf">http://www.ojp.usdoj.gov/BJA/evaluation/links/WK-Kellogg-Foundation.pdf</a> .

Week 12 [Nov. 15]	Budget and Budget Justification
<b>Objective</b>	This week's lecture will discuss various types of budgets. Guidelines and examples of how to develop and justify project budgets will be provided.
<b>Required Readings</b>	Foundation Center (2010) Proposal budgeting basics. Retrieved from: <a href="http://foundationcenter.org/getstarted/tutorials/prop_budgt/">http://foundationcenter.org/getstarted/tutorials/prop_budgt/</a> .
<b>Further Readings</b>	

Week 13 [Nov. 22]	Project Sustainability
<b>Objective</b>	One of the most abiding challenges in public health project design and implementation is how best to ensure project sustainability beyond donor funding. This week's lecture will discuss approaches for increasing the sustainability of projects.
<b>Required Readings</b>	<p>Kilbourne AM, Neumann MS, Pincus HA et al. (2007) Implementing evidence-based interventions in health care: application of the replicating effective programs framework. <i>Implementation Science</i>; 2:1; 42. Retrieved from: <a href="http://www.implementationscience.com/content/pdf/1748-5908-2-42.pdf">http://www.implementationscience.com/content/pdf/1748-5908-2-42.pdf</a> .</p> <p>Marschalek I (2008) The concept of participatory local sustainability projects in seven Chinese villages. <i>Journal of Environmental Management</i>. 87:2; 226-35.</p> <p>Bamberger M, Shabbir C (1990) Case studies of project sustainability. Pp.1-111. New York: World Bank.</p> <p>Bossert TJ (1990) Can they get along without us? Sustainability of donor-supported health projects in Central America and Africa. <i>Social Science and Medicine</i>; 30:9; 1015-23.</p>

Week 14 [Nov. 29]	Ethical Considerations in Project Design, Implementation & Evaluation
<b>Objective</b>	This week's lecture will provide guidelines on how to examine and identify project related risks to participants. It will introduce you to various local, national, and international policies and guidelines related to ethical involvement of participants in public health research. Strategies to ensure implementation of appropriate ethical safeguards for involvement of participants in public health research will be presented.
<b>Required Readings</b>	<p>Department of Health and Human Services (2010) Institutional Review Board Guidebook. Chapter IV: considerations of research design. Office for Human Research Protection. Retrieved from:  <a href="http://www.hhs.gov/ohrp/irb/irb_chapter4.htm">http://www.hhs.gov/ohrp/irb/irb_chapter4.htm</a>.</p> <p>Department of Health and Human Services. (1979) The Belmont Report. Ethical principles and guidelines for the protection of human subjects of research. National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. Office of the Secretary. Retrieved from  Available at: <a href="http://ohsr.od.nih.gov/guidelines/belmont.html">http://ohsr.od.nih.gov/guidelines/belmont.html</a>.</p> <p>Department of Health and Human Services (1997) The Nuremberg Code. DHHS. Office for Human Research Protection. Retrieved from:  <a href="http://ohsr.od.nih.gov/guidelines/nuremberg.html">http://ohsr.od.nih.gov/guidelines/nuremberg.html</a>.</p> <p>Thomas SB, Quinn SC (1991) The Tuskegee Syphilis Study, 1932 to 1972: implications for HIV education and AIDS risk education programs in the black community. American Journal of Public Health 81:11; 1498-1505. Retrieved from:  <a href="http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1405662&amp;blobtype=pdf">http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1405662&amp;blobtype=pdf</a>.</p>

Week 15 [Dec 6]	Ethical Considerations & Course Conclusion
<b>Objective</b>	Discussion on ethical conduct of public health research continues.....
<b>Required Readings</b>	Varmus H, Satcher D (1997) Ethical complexities of conducting research in developing countries. <i>New England Journal of Medicine</i> 337:14; 1003-5.