“[We] should be aware of state of the art treatment for specific disorders as represented in the scientific literature and endorsed by government health agencies. If the worker cannot treat with specificity, then the client should be referred for proper treatment. The impression should not be given that all treatments are equal or that treatments of demonstrated efficacy are simply alternatives. (p11)”

— Mary Richmond as recounted in Myers and Thyer (1997) “Should Social Work Clients Have the Right to Effective Treatment?”

“Suppose you are suffering from a distressing illness, painful or incapacitating, and your physician says that it would be a good idea to have surgeon X perform a certain radical operation in the hope of curing you. You would naturally inquire whether this operation works for this disease and how risky it is. The physician might say, “Well, it doesn't always work, but it's a pretty good operation. It does have some risk. There are people who die on the operating table, but not usually.” You would ask, “Well, what percentage of times does it work? Does it work over half the time, or 90%, or what? And how many people die under the knife? One in a thousand? If it were five in a hundred, I don't know that I'd want to take the chance, even though this illness is irksome to me.” How would you react if your physician replied, “Why are you asking me about statistics? We are talking about you—an individual patient. You are unique. Nobody is exactly like you. Do you want to be a mere statistic? What differences do those percentages make, anyway?” We do not think a person should be pleased if the doctor replied in that evasive fashion. Why not? Because, as Bishop Butler (1736) said, probability is the guide of life.”

Credit Hours: 3
Prerequisites: Basic Background in Research Methods and Statistics
Instructor: Andrew Grogan-Kaylor, MA, MSSW, PhD
Office: 3847 School of Social Work
Phone: 615-3369
Email: agrogan@umich.edu (best way to get in touch with me)
(please put “SW831” in the subject line)
Office Hours: Wednesday 9-11 or by appointment

Course Web site at http://ctools.umich.edu/

COURSE DESCRIPTION:

This course focuses on theoretical and strategic issues in designing and implementing evaluations of programs and interventions including assessment of impact with special attention to dimensions of Privilege, Oppression, Diversity and Social Justice. Our focus on these dimensions includes attention to the interface with race, gender, and poverty. Topics include: (1) translation of theory into measurement and specification of variables, (2) experimental designs, (3) appropriate development of measurement tools that are both stable (reliable) and sensitive to change, (4) alternative data sources (observational, self-report, archival data including clinical records and management information systems, focus group, key informant), (5) development of timely and ongoing stakeholder and community involvement in design and implementation of evaluation, (6) ethical issues, and (7) where appropriate, sampling issues.

The course is interactive. We will use a mix of lecture, laboratory time, and student led discussion to provide examples and applications of course concepts.

COURSE OBJECTIVES:
Upon completion of this course, students should be able to:

1) Assess the evaluability of a program.
2) Develop experimental and quasi-experimental program evaluation designs.
3) Select or develop appropriate measurement tools.
4) Understand strengths and weakness of a variety of data sources.
5) Choose relevant theories and operationalize relevant constructs.
6) Identify stakeholders and their role in evaluation.
7) Understand methods to enhance utilization of evaluation
8) Have a critical grasp of ethical issues at each stage of the evaluation process, including a working understanding of means to address these issues.
TEXTBOOK:


OTHER REQUIRED READINGS:

Other required readings are all available on CTools.

OVERVIEW OF COURSE REQUIREMENTS:

Course grade is based on class participation (40%) and a final research proposal (approx. 15 pages) (50%) and evaluation dashboard (10%). Sections of the proposal will be due throughout the semester, so that the final project will build upon work done all semester. More detailed instructions about the final assignment will be forthcoming.

Participation includes:

1) Active participation in class discussions.

2) A short verbal presentation (10 minutes) on the last class period that overviews the evaluation and highlights issues for class discussion.

The final proposal will be something that you will work on in stages all semester and will include:

1) Selection of an intervention or prevention program of interest either from the published literature, one the student is working with or has worked with, or one the student has designed.

2) Provide a concise description of the program and its operation, including purpose, intended participants, staffing, setting, activities, service intensity, etc.

3) Construct a logic model which charts a process evaluation what does the intervention entail, who does what, where, how.

4) Specify the program theory, that is, the mechanisms through which the intervention is expected to produce its intended outcomes; this includes a model of the independent and dependent variables, the proximal and distal outcomes, mediating and moderating factors.

5) Present the focus or aims of the evaluation study, including specific hypotheses or evaluation questions. Provide a rationale for why this focus has been selected.

Please pay close attention to these criteria as they will serve as the foundation of grading criteria.

Some students, as part of their program, are hoping to write a proposal for funding, such as an NSF, or NIMH proposal. If you would like to tailor your work in this class to such a proposal, please come talk with me, and we will see what we can do.
6) Overview of the evaluation design (experimental or quasi-experimental) and a rationale for its selection, including how the evaluation design will operate.

7) Discussion of selection of participants, including a power analysis, and consideration of strengths and limitations of your sample in terms of generalizability.

8) Identification of indicators (measures) that will be utilized, rationale for their selection, how and when indicators will be obtained. You need to specifically identify which scales, measures or instruments will be used. You should provide definitions of the key dependent and independent variables, both in conceptual and operational terms, including reliability and validity. Discuss possible alternative sources of information. You should provide information on Cronbach’s alpha for scales.

9) Some discussion of bivariate results—from prior empirical quantitative data—that pertain to your proposal. Your results should include appropriate bivariate statistics, including at least one graph that is relevant to the question at hand. Graphs should have appropriate titles and axis labels.

10) Detail how culture and social context are handled in design and measurement. Identify possible limitations, including participant availability, likely biases or confounds, the effects of gender, race/ethnicity, age, etc., considerations on evaluation outcomes. Discuss the feasibility of the evaluation design; what barriers are likely to be encountered? How will these be overcome?

11) Discuss potential ethical issues in evaluation design, data collection or analysis.

12) Describe the plan for involving stakeholders and for disseminating results.

**EXPECTATIONS:**

**Class interactions** - All students are encouraged to fully participate in class, especially if they do not understand the material. This evaluation course should be a fully interactive one; no question will be regarded as a stupid one by the instructor. (However, the instructor will reserve the prerogative of asking students to meet separately if discussion or questioning is so extensive that it infringes on the topics which other students need to have covered.) Please provide the instructor with feedback if points are not clear or if presentations are not providing useful information. The classroom should be an open forum for free exchange of differences of opinion and for discussions of these differences and for promoting understanding.

**Attendance** - Students are expected to attend every class session. Students should inform the instructor in advance of expected absences which are unavoidable. If any emergency arises, students are expected to notify me or leave a message at my office as soon as possible.

**Written products** – Written products are to use APA American Psychological Association formatting.

**Lab Work** – We will spend some time many weeks doing lab work. You are expected to bring a laptop computer to these sessions. (Please let me know if bringing a laptop computer to
class will pose any difficulty, as some computers may be available from the SSW computer lab). The purpose of the lab is to give you hands on experience with different aspects of evaluation. I find that grappling with concepts in a hands on way improves our level of skill development as well as the quality of ongoing discussions. Most of the learning in lab occurs in the doing of lab. Lab is intended to be a collaborative endeavor where students work with the instructor and with each other. I will not directly grade your lab work, or be able to provide written feedback on your lab work. I am always happy to discuss lab work during lab, during office hours, or over e-mail. Much of our lab work will be done using R open source software for data science and statistics, and some instructions on getting started in R can be found on CTools.

A note on work handed in late – Most students turn in work in accordance with class deadlines. In order to be fair to the majority of students, I have developed the following policy: late work will be graded down by half a grade a day unless prior arrangements for an extension have been made with me. I very much understand that extenuating circumstances may arise which make it difficult to turn in work on time. All I am asking you to do is to communicate with me if you need some kind of extension so that we can work out an arrangement that is mutually agreeable.

Grading Scale

"A" grades are given for exceptional individual performance and mastery of the material. The use of "A+", "A", and "A-" distinguishes the degree of superiority. "B" grades are given to students who demonstrate mastery of the material, at the level expected for the course. "B+" is used for students who perform just above the mastery level but not in an exceptional manner. "B-" is used for students just below the mastery level. "C" grades are given when mastery of the material is minimal. A "C-" is the lowest grade which carries credit. "D" grades indicate deficiency and carry no credit. "E" grades indicate failure and carry no credit.

Plagiarism

Plagiarism or other academic misconduct will be dealt with severely in this course. Please note that for purposes of this course, plagiarism consists of six or more consecutive words, taken from another source without proper attribution. Failure upon my part to detect plagiarism does not imply approval of plagiarism.

Data Sets

Both of the written paper projects for this course require you to make use of previously collected data, usually publicly available secondary data, for your analyses. I will work with

---

3 Adapted from the University of Michigan School of Social Work Student Guide
you to identify suitable data. Below are some suggested data sets for the two major types of analyses that we will discuss in the course:

It may be the case that you have access to data that is not publicly available, for example data from a research project, or agency, with which you are involved. It is perfectly acceptable to use such data, but you must have a copy of this data in hand at the time that you turn in your one paragraph on each study.

**SCHEDULE OF TOPICS READINGS AND ASSIGNMENTS**

<table>
<thead>
<tr>
<th>week</th>
<th>date</th>
<th>topic</th>
<th>lab</th>
<th>readings (all readings except HPPE on CTools)</th>
<th>assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/8/2014</td>
<td>introductions and outline of the course</td>
<td></td>
<td>This is probably the heaviest reading week of the term.. Please give a light read to the first two readings to get some general motivations for carrying out methodologically rigorous evaluations: Watch Dan Ariely RE &quot;Are We in Control of Our Own Decisions?&quot; (TED) Executive Summary from &quot;When Will We Ever Learn&quot; Then pay substantially more attention to Chapters 1 and 3 HPPE</td>
<td>1 paragraph identifying your research question of interest and data set. Template on CTools</td>
</tr>
<tr>
<td>2</td>
<td>1/15/2014</td>
<td>program theory and logic modeling and Gantt charts</td>
<td>R</td>
<td>&quot;R in a Few Pages&quot; by AGK for an introduction to some of the technical details of our work. Skim &quot;Should Social Work Clients Have the Right to Effective Treatment&quot; for some philosophical motivation for the work ahead (albeit in an older and discipline specific article)</td>
<td>(1) Download and install R, RCommander and Rstudio to your laptop. (see information sheet on CTools) (2) ROUGH DRAFT list of program steps. Template on CTools</td>
</tr>
<tr>
<td>3</td>
<td>1/22/2014</td>
<td>Lab Day Intro to R and Gantt charts in R</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course No</td>
<td>Date</td>
<td>Activity Description</td>
<td>Literature/Video Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1/29/2014</td>
<td>Measures 1 (reliability, validity and basic psychometrics, adapting to culture and context)</td>
<td>Measures R? Chapter 5 HPPE Please read at least the English versions of PHQ and SDQ posted on CTools. If you speak another language, please let me know and I'll post versions online as well in that language (if available)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2/5/2014</td>
<td>Research design (randomization, comparison conditions, experiments, quasi-experiment s and observational designs)</td>
<td>Chapter's 6 &amp; 7 HPPE Watch Ben Goldacre &quot;Battling Bad Science&quot; (TED)</td>
<td>Literature Review &amp; Logic Model</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2/12/2014</td>
<td>Research design 2 (SMART and adaptive research designs)</td>
<td>R TBD</td>
<td>Literature Review &amp; Logic Model</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2/19/2014</td>
<td>Basic bivariate analysis</td>
<td>Hans Rosling RE &quot;The Joy of Statistics&quot; Chapter 20 HPPE AGK video lecture on bivariate statistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2/26/2014</td>
<td>LAB DAY (bivariate analyses)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3/5/2014</td>
<td>SPRING BREAK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3/12/2014</td>
<td>Sampling (types of samples, external validity, powering an analysis)</td>
<td>Chapter 9 HPPE AGK video lecture on statistical power (deciding upon sample size)</td>
<td>Bivariate Results (including calculation of Cronbach's alpha)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3/19/2014</td>
<td>Bayesian approaches to decision making for intervention science</td>
<td>Exercise in Bayesian thinking drawing on Table 3, Canonical example of Bayes’ theorem in detail by John D. Cook</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Date</td>
<td>Event</td>
<td>Source</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3/26/2014</td>
<td>research synthesis &amp; meta-analysis R (ESP)</td>
<td>Chapter 22 HPPE</td>
<td>Methods Section of Proposal Due</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&quot;The Truth Wears Off&quot; by Jonah Lehrer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&quot;Most published research findings are false&quot; by John Ioannidis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rewatch Ben Goladacre</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(&quot;Battling Bad Science&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>starting at 10:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>4/2/2014</td>
<td>visualization with R and googleVis R</td>
<td>Watch &quot;The Beauty of Data Visualization with David McCandless&quot; (TED)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chapters 25 &amp; 27 HPPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>4/9/2014</td>
<td>instructor out of town (prep consultation week)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4/16/2014</td>
<td>LAST CLASS: Student presentations of research proposal and dashboard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4/23/2014</td>
<td>NO CLASS: Final Paper due</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>