
Those who are enamored of practice without science are like a pilot who goes into a ship without rudder or compass and never has any certainty where he is going.
--Leonardo da Vinci

Credit Hours: 3
Prerequisites: None
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)

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

1. Course Description. This course provides content on the logic of inquiry and the necessity for an empirical approach to practice. This course will address content on the process of formulating appropriate research questions and hypotheses, techniques for testing relationships and patterns among variables, methods of data collection, methods to assess and improve the validity and reliability of data and measures, and the ethics of scientific inquiry. This course will help students understand practice through the critical examination of methods associated with decision-making, critical thinking, and ethical judgment. The course content will integrate the core themes related to multiculturalism and diversity, promotion and prevention, social change and social justice, and social science.

2. Course Content. The course covers qualitative and quantitative research methods, commonly used statistical procedures, and approaches to the evaluation of practice. It imparts an understanding and appreciation of a scientific approach to building practice knowledge and for evaluating practice. The course has a special focus on increasing one’s ability to critique theoretical foundations of research, form research questions, apply research methods, conduct statistical analysis, and interpret research reports. The latest statistical, graphical, and display technologies will be used.

3. Course Objectives

Upon completion of the course, students will be able to:

1) Frame research questions and develop problem statements that reflect assessment, implementation, monitoring, or outcome issues.
2) Select research designs, methodologies, and measurement strategies used in social work research, and be able to assess the strengths and weaknesses of each, including the sensitivity to ethical, multicultural, and diversity issues.
3) Understand ethical issues in the conduct of research and evaluation, and their relevance and applicability in working with disadvantaged and disenfranchised populations.
4) Understand research concepts to permit a critical analysis of research and evaluation studies with respect to quality, bias, ethics, and potential applications.
5) Apply research concepts and principles in the development and use of qualitative and quantitative methodologies and analytical approaches.
6) Critically examine the processes by which research and evaluation findings can be used to enhance social justice, social change, promotion and prevention.
7) Construct simple indices, questionnaires and measures relevant to the evaluation of practice.
8) Use computers to conduct selected descriptive and inferential statistical analytic procedures.

4. Course Design

The course will use many different methods for acquiring knowledge and skills, including discussion, lectures, projects, exercises, and lab work. The course is designed to increase students’ comfort level with research methods and statistical analyses and to increase their appreciation of the relevance of research and evaluation for social work practice.

5. Relationship to Four Curricular Themes

A. Multiculturalism and Diversity. The course will include material on methods to improve the cultural inclusiveness and cultural sensitivity of research methods. This content will cover culturally sensitive measures, inclusion of diverse groups of adequate size in sampling, culturally aware interpretations of data, and culturally responsible dissemination of results. The basic purpose of research and practice evaluation will also be analyzed from culturally bound perspectives.

B. Social Justice. Students will gain an understanding of the ways in which research and evaluation have sometimes been used against oppressed groups, for example through unethical practices, distortion of results, or fabrication of data. Examples will be given of ways in which research can be used to empower socially disadvantaged individuals, groups, and communities. These examples will include studies in which the research participants were involved in the study during all of its stages.

C. Promotion and Prevention. Studies reviewed in the course will include studies of projects aimed at enhancing well-being and preventing problems. The methodological and ethical problems unique to studies of promotion and prevention efforts will be described. The social work values consistent with promotion/prevention research will be analyzed.

D. Social Science. The unique challenges in applying social science knowledge and methods to social work settings will be covered. These challenges include the practical and ethical dilemmas of applied research. Emphasis will be placed on the way established theories and methods influence the selection of research questions and methods. Studies will be critiqued
for their ability to advance social science theory and knowledge and to improve social work practice.

6. Relationship of the Course to Social Work Ethics and Values. The research and evaluation section of the NASW Code of Ethics will be applied throughout the course. Examples of common ethical dilemmas will be presented. Among the areas of ethics to be covered will be informed consent procedures, protection of research participants from harm, confidentiality, and accurate reporting of results. An emphasis will also be placed on social workers’ ethical obligation to use scientifically sound practice and to continually evaluate their practice and programs.

Required Text


Other readings are available online through coursetools, or will be provided by the instructor.

Suggested Text

Trochim. A very readable online textbook called Knowledge Base, at http://trochim.human.cornell.edu/kb/index.htm

Data Sets

- As the semester progresses, I will make an extract of the National Longitudinal Survey of Youth available on the coursetools web site. It is my hope that many of you will make use of the NLSY, a database that I use in my current research. Since I am familiar with this database I am more likely to be able to help you answer questions about its use.

- Other data sets are available through the SDA Online Data Analysis System (http://www.icpsr.org/ACCESS/sda.html) available through the Inter University Consortium for Political and Social Research (ICPSR) Housed at the University of Michigan. The Social Science Data Analysis Network (http://www.ssdan.net/) is a resource on campus of which I have only recently become aware, but may also be a source for Census related data sets.

- I do have some other specialized and general data sets (including the Women’s Health Study) that I can make available on CTools if there is need and interest.
Suggested Software

- SPSS (available in most campus computer labs) (in class exercises will focus on the use of SPSS although the statistical concepts covered transcend any one statistical software package)

- Some data sets may also be analyzable through the SDA Online Data Analysis System (http://www.icpsr.org/ACCESS/sda.html).

Course Requirements

1) **Written Research Project.** Sections of this paper will be due at different points over the term. These sections will be: research questions or hypotheses, the literature review, methods (sampling, measures, procedures), results, and discussion (interpretation, implications, conclusions). Consultation with the professor and other students will be available. Quality of writing, and clarity of presentation, will be one of the criteria used in grading. Refer to the Student Handbook to make sure that you cite other’s work properly and avoid plagiarism. Plagiarism—when discovered—will be dealt with severely. Further details of this assignment are attached and will also appear on the class Web site.

   a. Final paper (incorporating all previous sections) 50% of semester grade

   b. First draft of literature review 10% of semester grade

   c. First draft of methods section 10% of semester grade

2) **MLK Exercise.** [10% of grade; Pass/Fail: Satisfactory completion = A]. Assignment is described in detail in the course schedule.

3) **Class participation:** You will probably learn more the more you participate, but you will NOT be evaluated on your participation. There are too many variations that affect the rate of participation in this course.

4) **Attendance.** You are expected to attend each class and lab session. If you miss a class session for any reason, please see me to make sure that you are grasping the material. In particular, you will be expected to complete all lab assignments, unless we make other arrangements.

5) **Lab Work.** [20% of grade; Pass/Fail: Satisfactory completion of all assignments=A] We will spend some time every week in the computer lab. The purpose of the lab is to give you hands on experience with the building blocks of research, data handling, and data analysis. Lab work will illustrate the terms you learn in the text, such as “variable”, “value”, “case”, etc. and will lead to statistical analysis of data that you will need to know for your research.

---

1 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.
project. You'll use the lab to learn how to do important steps in research rather than simply reading research studies or reading about research. Most of the learning in lab occurs in the doing of lab. Although, I will frequently collect your work in lab, I will not 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.

A note on grades\(^2\): Grade inflation is rampant across undergraduate and graduate schools around the country. I see this inflation as unnecessary (for jobs, Ph.D. programs, funding opportunities, success, etc.). While many students in this school do very skilled work, I am relatively certain that several students will receive B’s in this course. Honesty is a better and clearly more ethical policy of feedback than false praise and reward. I will endeavor to always explain my grades clearly and to document my explanations.

\(^2\) Adapted from a similar statement by David Burton.
<table>
<thead>
<tr>
<th>Class</th>
<th>Date of Class</th>
<th>Topic</th>
<th>Readings and Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/9/06</td>
<td>Introduction to the course.</td>
<td><strong>Special assignment due in week 4:</strong> You should have an opportunity to attend one of the many special events during MLK week. Search in Psycinfo in Mirlyn to find a research article related to the topic of the event. It must be a report of a research study in which original data were collected, as opposed to a theory article or a review of studies. Turn in a copy of the abstract of the article. In 1-2 pages, summarize the article, describe how the results may or may not be relevant to social work practice, and list the key words you used to find the article.</td>
</tr>
<tr>
<td>2</td>
<td>1/16/06</td>
<td><strong>Martin Luther King, Jr. Day University Symposia. No Regular Classes</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 3     | 1/23/06       | The Relationship of Theory and Research (Correlation, Cause, Counterfactuals and Falsification) | Assignment Due: **One page** statement of Research Question and Data Set to be Used  
RB: Chapter 1 - "Scientific Inquiry and Social Work"  
Chapter 2 - "Philosophical Issues in Science and Research"  
Chapter 3 - "Theory and Research" |
| 4     | 1/30/06       | Social Science Knowledge of Oppressed Populations - Values in Research and Practice and Formulating a Research Question | **MLK Assignment Due**  
British Medical Journal article on evidence based practice  
RB: Chapter 4 - "The Ethics and Politics of Social Work Research"  
Chapter 5 - "Problem Formulation" |
| 5     | 2/6/06        | Descriptive Statistics | **Assignment Due:** Title, Introduction and Problem Statement  
RB: Chapter 16 - "Interpreting Descriptive Statistics and Tables" |
| 6     | 2/13/06       | Data Collection -- Measures | **Assignment Due:** Title, Introduction and Problem Statement  
RB: Chapter 6 - "Conceptualization and Operationalization"  
Chapter 7 - "Measurement"  
Chapter 8 - "Constructing Measurement Instruments" |
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/20/06</td>
<td>Selecting Research Participants -- Sampling</td>
<td>RB: Chapter 9 - &quot;The Logic of Sampling&quot;</td>
<td></td>
</tr>
<tr>
<td>2/27/06</td>
<td><strong>Spring Break</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/6/06</td>
<td>Designing and Fielding a Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/13/06</td>
<td>Research Design (Experimental, Non-Experimental, Quasi-Experimental and Single Subject Designs)</td>
<td><strong>Assignment due:</strong> Methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RB: Chapter 10 - &quot;Causal Inference and Group Designs&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 11 - &quot;Single Case Evaluation Designs&quot;</td>
<td></td>
</tr>
<tr>
<td>3/20/06</td>
<td>Research Designs Continued</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/27/06</td>
<td>Inferential Statistics</td>
<td>RB: Chapter 17 - &quot;Inferential Data Analysis: Part 1&quot;</td>
<td></td>
</tr>
<tr>
<td>4/3/06</td>
<td>Inferential Statistics 2</td>
<td>RB: Chapter 18 - &quot;Inferential Data Analysis: Part 2&quot;</td>
<td></td>
</tr>
<tr>
<td>4/10/06</td>
<td>Overflow Day and Developing Data Analysis Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/17/06</td>
<td>Interpretation of Data -- Using Research in Practice</td>
<td><strong>Assignment Due:</strong> Final Research Paper</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 19 - &quot;Program Evaluation&quot;</td>
<td></td>
</tr>
</tbody>
</table>
During the semester you will work on a research project that will implement and make concrete many of the concepts and statistical procedures learned in the course. In other words, the project will bring to life the readings and lab work!

The project can be a basic research project, or an evaluation of service. I will supply data sets for analysis. Hopefully, the data will cover a topic of interest to you. In rare cases, you may be in a position to collect or provide your own data. If so, we will most likely need to seek approval of the Human Subjects Committee.

The paper will be divided into the following major sections, which are also to be used as the outline for the paper with corresponding subheadings. You will be asked to turn in drafts early in order to obtain feedback. The American Psychological Association Publication Manual gives an excellent description of a research report. The Publication Manual [found in our library] can also help you with writing style.

SUGGESTED page lengths are given below. Pages are to be DOUBLE SPACED. This is a suggested outline and can be different for some types of studies.

**Title, Introduction and Problem Statement:** include a literature review, how current problem builds on past research, hypotheses or research questions you are exploring or testing. [suggested page limit 2-4 double spaced. 30% of this paper’s grade]

1) **Title:** try to capture your research question or hypothesis in the title, e.g. “The Relationship Between Domestic Violence, Welfare, and Emotional Health in a National Sample of Women”

2) **Scope of the problem**—2-3 sentences may be enough

3) **Background** of the research question. Why is the study you are doing important? Review the relevant prior research in this area—1-3 pages

4) What is your research question or hypothesis? Usually 1 paragraph.

---

3 Please consult with me explicitly, if you are considering this option.
Methods:
1) **sample**—how recruited, simple demographic description
2) **measures**, including their reliability and validity,
3) **procedures** for gathering data—e.g. was it a self-administered questionnaire or an interview?
4) **Analytic method**—what statistical procedures are being used?
   [suggested 1-4 page length for the methods section. If you are using secondary data, you will need to paraphrase the information from an existing publication or report; 15% of this paper’s grade]

Results: Describe the results of your analysis. Use tables, graphs and statistics as appropriate without making conclusions or editorial statements. Explain the results in the text of the paper. If you want to report some simple, univariate statistics, do so before you report the group comparisons, or associations. At a minimum, you must report a statistic showing the relationship between two variables. [1-4 pages suggested. Due last class session as part of entire research report; 25% of this paper’s grade].

Discussion: conclusions and any implications for practice or further research. [2-3 pages] Summarize briefly the results in written form.
1) Do your results support the hypothesis or inform the research question?
2) What are the implications for practice, policy or further research?
3) What are the limitations of the methods used?
4) Conclusion [usually 1 paragraph]
   [Due last class session; 30% of this paper’s grade]

Reference List: preferably use the style of the American Psychological Association.

Students who choose to work on similar project can form study groups to share information, including data sets. Each student will cover a different aspect of the problem [at least different variable] and will write a separate report. The Method section may be very similar to each other.

Exemplary papers from past classes will be placed on reserve or on the class Web site for you to review.

---

4 Please observe that I am not interested in, nor will I check, the minutiae of APA style. I only ask that your citations be consistently styled, and clear enough so that I can find the works that you’ve cited with a minimum of effort.