

## **L509 Introduction to Research and Statistics**

Spring 2007 (section 2, 26468)  
Sundays 1:30 to 4:10 pm  
IUPUI Campus UL 1116  
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### **Catalog description**

The research process, including concepts, design, conduct, and evaluation. Principles and characteristics of approaches and methodologies relevant to research in the field. Examples of data sources and introduction to methods of statistical description and analysis; ethical issues.

### **Student objectives**

Upon completion of the course, students will:

- ◇ understand the various types of professional literature in librarianship and their place in the development of library science
- ◇ articulate research questions including theories, operationalizations, and hypotheses, within ethical guidelines
- ◇ analyze the strengths and limitations of key research methods, both quantitative and qualitative, for library research situations
- ◇ take a question or project from idea up to research or evaluation data-gathering
- ◇ possess basic skills in numerical, textual, and oral communication of research

### **Course resources**

Textbooks: **consult instructor** – you may pick ONE of these:

People from educational, museum or philanthropic backgrounds or studies, or those interested in supporting researchers in the social sciences, may prefer:

Babbie, Earl J. *The Practice of Social Research*, 10<sup>th</sup> edition. Belmont, Calif.: Thomson-Wadsworth, 2004 [any edition after 1999 would be okay].

Those interested in conducting library research should use:

Ronald R. Powell and Lynn Silipigni Connaway, *Basic Research Methods for Librarians*, 4th Edition, Libraries Unlimited, 2004. 1-59158-112-5 (paperback).

Other **readings** will be listed in the Timetable. These readings will be from journals electronically available from the University Library.

**High-speed internet** access will be very useful (though not required). A substantial part of this course will take place using (new) OnCourse. Consider downloading / installing Firefox (from IUWare) as a back-up to Explorer, as OnCourse is often buggy. Macs seem to have problems with OnCourse as well.

Students in this course must format all citations in written work using either the American Psychological Association Publication Manual, or the Modern Language Association citation manual, or the Chicago Manual of Style (humanities or author-date formats). A cheat-sheet will be available and more resources are available online through the University Library.

### **Assignments**

Rubrics (expectations) for assignments are posted in the Resources section of OnCourse.

- 5% Initial literature review: locate and briefly review 2 research articles, with empirical data, relevant to your topic of interest. At least one should be from before 2000; find and review 2 articles which cite one of these two articles (= total of 4 articles).
- 10% Article analysis A: Examine one article in depth for its: review of literature, variables, discussion of findings.
- 10% Article analysis B: Examine the same article in depth for its: variables, measurement techniques, and research design.
- 20% Re-Review of literature: Review eight articles (including if desired those previously used) on your topic, summarizing variables, research design, findings, and relevance. Separately, produce the first draft of a 'literature review' section of an article or research proposal.
- 20% Research concepts postings. During the semester, questions will be posted in the Discussion area. Post one response, and one reply to a colleague's response, to each question.
- 30% Final project--Options:
  - A. Research: either
    - draft research article: literature review, methodology description, and discussion (omitting results), in the format of a library science journal.
    - draft research protocol: literature review and description of research design, in Institutional Research Board format
  - B. Evaluation: Proceed through the Shaping Outcomes online tutorial. Prepare a "logic model" with a brief literature review to support design decisions and evaluation methodology.
- 5% For both: Oral presentation: Describe as to a grant review board or a conference audience: why your project is interesting, important and worth doing.

## **Timetable**

### General notes

This course meets on Sundays. It WILL meet on MLK weekend Sunday; it will NOT meet on Sunday March 11<sup>th</sup> as the first day of spring break; it WILL meet on Sunday March 25<sup>th</sup>. During two of the last three weeks the instructor will coach students individually, either in person or online, on their evaluation or research projects. Oral presentations will occur on the last week of classes, and extend to exam week depending on the number of students enrolled (or if bad weather forces cancellation of the session the last week of classes).

**Easter Sunday:** This course is scheduled to meet on Easter Sunday (April 8<sup>th</sup>). Postponing the class content to the next week will put a strain on the final projects (the instructor is unavailable April 1<sup>st</sup>). The instructor will work with students to get each one set up with the content and for the final project.

### Read for the first class session:

BRM chapter 2 **OR** Babbie chapter 4

And....

ONE of these:

Carlson, J. (2006). "An Examination of Undergraduate Student Citation Behavior." *Journal of Academic Librarianship* 32(1): 14-22.

Chang, H. R. and M. P. Holland (2005). "User Satisfaction Survey of Ask-A-Question Service at the Internet Public Library." *Internet Reference Services Quarterly* 10(2): 61-72.

Limberg, L. and M. Alexandersson (2003). "The School Library as a Space for Learning." *School Libraries Worldwide* 9(1): 1-15.

January 14<sup>th</sup>

Research definitions, ethics, process; history in the field

The classic research article

### Read for next time:

BRM, chapter 11 **OR** Babbie chapter 17

Kellsey, C. (2005). "Writing the Literature Review: Tips for Academic Librarians." College & Research Libraries News 66(7): 526-527.

January 21st

Choosing a topic  
Forms of research dissemination  
Introduction to the literature / concept / research review

Read for next time:

Bookstein, Abraham. "On the Complexities of Asking Questions: Difficulties in Interpretation of Library Surveys." Library Effectiveness: A State of the Art. New York: ALA/Library Administration and Management Association, 1980. 35-48. [Posted as a pdf in Resources]

January 28<sup>th</sup>

Operationalization, relevance  
The literature search, again  
Read for next time:  
BRM chapters 7 AND 8 OR Babbie chapters 10-or-11\* AND chapter 13  
\*skip section on "existing statistics."

February 4<sup>th</sup>

Qualitative data gathering  
Reliability  
Focus on the tool: focus groups  
**Due: Initial Literature Review**  
Read for next time:  
BRM chapter 3 OR Babbie chapter 6  
Allen, Edward S. "Periodicals for Mathematicians." Science 70.1825 (1929): 592-94. (Available in JSTOR—use UL citation linker)  
Nisonger, Thomas E., and Charles H. Davis. "The Perception of Library and Information Science Journals by LIS Education Deans and Arl Library Directors: A Replication of the Kohl-Davis Study." College & Research Libraries 66.4 (2005): 341-77. (most of the length of this article is due to lists of journals)

February 11<sup>h</sup>

Quantitative data gathering  
External validity  
Focus on the tool: citation analysis  
**Due: Article Analysis A** (literature, variables, findings)  
Read for next time:

February 18<sup>th</sup>

Hypothesis formation  
Statistics workshop # 1: what is "p"?  
**Due: Article Analysis B** (variables, measurement techniques, design)

February 25<sup>th</sup>: NO CLASS in-person

Catch up with research question postings  
Propose research hypothesis/idea for final project  
Read for next time:

BRM chapter 6 OR Babbie chapter 8

March 4<sup>th</sup>

Experimentation  
Internal validity  
Focus on the tool: tests  
Read for next time:  
BRM chapter 5 OR Babbie chapter 9

March 11<sup>th</sup>

Sampling theory and practice  
Focus on the tool: surveys  
Read for March 25<sup>th</sup>:  
BRS chapter 9 OR Babbie chapter 14

March 18<sup>th</sup>: NO CLASS, spring break

March 25<sup>th</sup>

Statistics workshop # 2: Survey analysis  
Descriptive and analytical statistics  
Read for next time:

April 1<sup>st</sup>: NO CLASS in-person

Postings on use of statistics in research  
Read for next time:  
BRM chapter 10 OR Babbie chapter 12  
Glenn, David. "Weighing the 'Scale-up' Study." Chronicle of Higher Education July 14, 2006:

A12+.

April 8<sup>th</sup>

Evaluation research  
**Finish discussion postings**

April 15<sup>th</sup>

NO CLASS in-person.  
Either: Shaping Outcomes-evaluation project or work on research projects. Instructor will coach online or in person

April 22<sup>nd</sup>

NO CLASS in-person.  
Either: Shaping Outcomes-evaluation project or work on research projects. Instructor will coach online or in person

April 29<sup>th</sup>

**Presentations**

May 6<sup>th</sup>

**Presentations if necessary; all final projects due**

### **Course Administration:**

Attendance:

In general, attendance in class will be necessary for full understanding of course content.

Powerpoints for some topics/lectures will be posted but do not contain detailed information.

Grading:

This course follows the general standards found in the SLIS Bulletin:

<http://www.slis.indiana.edu/Courses/forms/grades.html>

For assignments, the philosophy is the same: A assignments will be completed with both full mastery and high originality; B assignments will show solid understanding; Cs or below will be assigned when it is apparent that not all aspects of an assignment have been completed satisfactorily.

**Play close attention to requirements described in assignment Rubrics posted in the Resources section.**

Failure to complete required sections of assignments will result in C grades.

The OnCourse Gradebook will be used.

Letter grades will be assigned and translated into points:

These are on a 100-point scale, which will be adapted for assignments with 5, 10 20, or 30 points.

A = 98            A- = 93            B+ = 88            B = 83    B - = 78            C+ = 73

C = 68            C- = 63

OnCourse will then calculate weighted averages and translate the results into the following scale:

A = 95-100    A- = 90-94    B+ = 85-89    B = 80-84    B- = 75-79    C+ = 70-74

C = 65-69

PLEASE NOTE: The numbers specified here are arbitrarily designated in order to conform to OnCourse's mathematics. A "B" effort is NOT one in which you have completed 83% of the requirements. A "B" / 83 grade is assigned to "good work...meeting course expectations."

- ◇ After final grades are calculated, I will make adjustments up or down based upon class participation (1-2 points) and timeliness of assignments (1 point). That is, if you miss classes without notice, or turn in more than one assignment late, your grade could be lowered as much as 3 points. If you attend regularly and attentively and clearly engage the assigned readings in class discussion, your grade may be raised up to 3 points.

Academic honesty:

As in all university coursework, students are expected to adhere to standards of academic honesty (e.g. plagiarism) and professional ethics. The IUPUI Code of Student Rights, Responsibilities, and Conduct and the IUPUI Graduate Office Curriculum Subcommittee

<http://www.iupui.edu/%7Eeresgrad/grad/currcomm.htm> may be consulted for definitions and procedures.

You are encouraged to use the resources listed in the syllabus (or others), but if you use them directly, you need to provide proper citations (even if the assignment rubric does not include a bibliography).

Pay particular attention to wording in 'literature reviews.' A guide to appropriate quoting or use will be posted.

Disabled students:

Students with disabilities should immediately inform the instructor and contact Adaptive Educational Services (317-274-3241). Reasonable accommodations will be made in accordance with specific advice from AES.