INTRODUCTION
Critical evaluation of information sources is a core competency for information literacy. Librarians must be proficient in critical analysis of research articles as both consumers of research in their own field and as teachers and advisors of patrons who may require guidance in choosing the best sources for their own research.

Furthermore, today's librarian is frequently called on to evaluate the use of services, materials and physical spaces, the efficacy of library instruction, the cost-effectiveness of various programs and materials, and patron opinions and desires, among other things. This class provides a foundation for understanding research methods and theories in order to effectively design and carry out original research as well as to critically evaluate and respond to the research of others.

GOALS AND OBJECTIVES
Upon successful completion of this course, students should be able to:

• Critically analyze current empirical literature;
• Demonstrate knowledge of available methods for evaluating library collections and services;
• Determine which methods are most appropriate for particular evaluation questions;
• Understand and apply basic descriptive and inferential statistics to data;
• Design and implement evaluation projects

GOAL: PROFICIENCY IN CRITICAL EVALUATION OF RESEARCH QUESTIONS AND METHODS
SUBGOAL: Proficiency in critical analysis of methodological strengths and weaknesses.

PERFORMANCE: Correctly identify strengths and weaknesses of various research approaches and methods. Correctly assess potential audiences for and utility of completed research.

TASK: Weekly analysis of articles.
TASK: Weekly discussion of articles.

SUBGOAL: Proficiency in critical analysis of arguments' logical structure and evidential support.

PERFORMANCE: Correctly identify assertions/knowledge claims and the specific evidence or support that is provided for these claims. Identify gaps in the logic or structure of these arguments

TASK: Weekly analysis of articles.
TASK: Weekly discussion of articles.
TASK: Argumentation quizzes
GOALS AND OBJECTIVES, cont.

GOAL: UNDERSTAND BASIC STATISTICAL METHODS IN THEORY AND IN PRACTICE

PERFORMANCE: Correctly utilize statistical methods to derive answers from data.

PERFORMANCE: Correctly explain conceptual basis for choice of test and of tests themselves.

TASK: Stats quizzes

TASK: Methods section

GOAL: UNDERSTAND THE STRUCTURE AND CONTENT OF AN ILS RESEARCH ARTICLE

PERFORMANCE: Formulate clear, original, answerable research questions

TASK: Introduction and problem statement

PERFORMANCE: Conduct a reasonably thorough literature review in order to contextualize a research question and demonstrate a gap.

TASK: Lit review

ALT TASK: Lit review outline

PERFORMANCE: Identify, justify and clearly describe appropriate methods with support from appropriate sources

TASK: Methods section

PERFORMANCE: Identify, justify clearly describe potential audience, potential impact and potential utility of research

TASK: Impact/conclusion section

INSTRUCTOR CONTACT INFORMATION

Email: garave@indiana.edu
Office hours: By appointment

HONOR CODE

This class, as all classes at Indiana University, requires that students abide by the “Code of Student Rights, Responsibilities and Conduct.” Please familiarize yourself with this document:

http://www.iu.edu/~code/

Students found to be engaging in plagiarism, cheating, or other types of dishonesty may receive a grade of an F on the assignment in question and may be reported to the Dean’s Office for appropriate action. In particular, please understand the various nuances of plagiarism and avoid engaging in this type of behavior. If you have any questions, it is your responsibility to meet with me in advance.
Grades

Assignments and percentage of final grade:

- IRB modules: 5%
- Evaluating Evaluation: 10%
- Stats quizzes: 20%
- Participation: 10%
- Final paper: 55%

Grades will be assigned on an A, B, C, D, F scale. The following definitions of letter grades have been defined by student and faculty members of the Committee on Improvement of Instruction and have been approved by the faculty (November 11, 1996) as an aid in evaluation of academic performance and to assist students by giving them an understanding of the grading standards at ILS.

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA</th>
<th>%</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>96-100</td>
<td>Outstanding achievement. Student performance demonstrates full command of the course materials and evinces a high level of originality and/or creativity that far surpasses course expectations.</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>90-95</td>
<td>Excellent achievement. Student performance demonstrates thorough knowledge of the course materials and exceeds course expectations by completing all requirements in a superior manner.</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>87-89</td>
<td>Very good work. Student performance demonstrates above-average comprehension of the course materials and exceeds course expectations on all tasks as defined in the course syllabus.</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>84-86</td>
<td>Good work. Student performance meets designated course expectations, demonstrates understanding of the course materials and is at an acceptable level.</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
<td>80-83</td>
<td>Marginal work. Student performance demonstrates incomplete understanding of course materials.</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>77-79</td>
<td>Unsatisfactory work. Student performance demonstrates incomplete and inadequate understanding of course materials. Coursework performed at this level or below will not count toward the MLS or MIS degree. For the course to count towards the degree, the student must repeat the course with a passing grade.</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>74-76</td>
<td>Unsatisfactory work.</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
<td>71-73</td>
<td>Unacceptable work.</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
<td>69-70</td>
<td>Unacceptable work.</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td>67-68</td>
<td>Unacceptable work.</td>
</tr>
<tr>
<td>D-</td>
<td>0.7</td>
<td>65-66</td>
<td>Unacceptable work.</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>&lt;65</td>
<td>Failing. Student may continue in program only with permission of the Dean.</td>
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Due Dates

All assignments must be handed in on their due dates. If you cannot deliver an assignment or a project on the date it is due, it is your responsibility to discuss your situation with the instructor in advance of the due date and request an extension.

Along with your request for an extension, you must provide a draft of your assignment in its current state. If no draft is provided, no extension will be granted.

If the extension is granted, late assignments will automatically lose at least one letter grade from the grade they would have received had they been turned in on time. For all due dates, see the schedule.
Assignments

IRB modules (5%)

To be a responsible consumer and producer of research products, it is important to understand not only the conceptual and pragmatic impacts of research projects, but also the human effects of both the application of methods during the investigation itself, and the subsequent findings. In order to provide an ethical grounding for the course, students are required to complete the Human Subject Research (Social/Behavioral Researcher) course via the CITI module provided by the Office of Research Administration (http://researchadmin.iu.edu/EO/eo_citi.html). Once the course is completed with passing scores (defined as at least 80%), students must save a copy of the Completion Report and submit it via the Appropriate Canvas assignment. If you have trouble saving, please do a print screen of the report screen. Take care to select the Social/Behavioral modules, rather than the biomedical modules. If you have completed your CITI training before this class, you do not need to redo it, but must show proof of completion.

Evaluating Evaluation (10%)

One of the objectives of this class is to enable you to become critical consumers of Library and Information Science research. To this end, you will be asked to make comments on the empirical articles from the class reading list. You will be required to choose one article from each session and post comments on this article. Your comments should be posted to the Canvas discussion board and should consist of the following components:

1. A Title for the post that includes the name(s) of the author(s) of the article on which you are commenting
2. A short (one or two-sentence) statement summarizing the goal(s) or objective(s) of the study and the method(s) used in the study;
3. Two strengths of the study (focus in particular on the method and how it facilitated the objective(s));
4. Two weaknesses of the study (focus in particular on some of the limitations of the method); and
5. A short (one or two-sentence) statement describing the potential implications and audience of the study.

Each post is worth 1% of your final grade. Each component of the post is equally weighted. Posts are due by 5:00 p.m. the night before the class for which the reading is assigned and should be made no earlier than the end of the preceding class. Half-credit will be given for posts made after 5pm. Only one post per class will be accepted for credit; however, you are welcome and encouraged to make comments on your classmates’ posts and to comment on more than 10 articles (such activity will likely enhance your participation grade).

Stats Quizzes (20%)

In order to critically consume and create library evaluation studies, one must have a basic knowledge of statistical tools and techniques. This class is not meant to be an in-depth study of statistics, but rather to provide you with an understanding of and an ability to conduct the statistical tests most often performed in library evaluation studies. Therefore, we will have “stats chats” in several sessions followed by a quiz due the following session. If you have any trouble completing the quizzes, please feel free to meet with me before the date on which they are due. If you receive outside assistance, you
must acknowledge this assistance on the bottom of the quiz. Any unacknowledged assistance will be seen as an act of academic dishonesty.

All stats quizzes are available in Canvas and may be completed earlier than the date specified but are subject to the due date policy stated above. Quizzes are due by 11:59 pm the night before the next class meeting, i.e. on Tuesday nights. Quizzes will be graded for accuracy.

The quiz topics are provided below, with corresponding percent values.

- Quiz #1: Levels of measurement (2%)
- Quiz #2: Probability, hypotheticals and significance (2%)
- Quiz #3: Central tendency and dispersion (2%)
- Quiz #4: Visualization (2%)
- Quiz #5: Correlations (3%)
- Quiz #6: Interrater reliability (3%)
- Quiz #7: t-tests (3%)
- Quiz #8: Chi-square (3%)

**Participation (10%)**

This class contains a large discussion component. To get the most out of the class you need to be in attendance and be engaged. It is also important that you have done the readings before class. There may be occasional in-class quizzes or activities that will require familiarity with the week's readings in order to complete them. A general rubric for assessing your participation in this class is provided below:

<table>
<thead>
<tr>
<th>%</th>
<th>MEANING</th>
</tr>
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<tbody>
<tr>
<td>10</td>
<td>Perfect attendance; displays knowledge of having read and synthesized all of the readings; engages in in-class activities and discussions; provides thoughtful discussion of the readings and provides respectful responses to classmates’ comments.</td>
</tr>
<tr>
<td>8</td>
<td>Missed or was late for one class; displays knowledge of the majority of the readings and provides thoughtful commentary in class; engages in in-class activities and discussions; shows respect for peers.</td>
</tr>
<tr>
<td>6</td>
<td>Missed or was late for two or three classes; reads some of the readings and makes at least one comment in class; some engagement in in-class activities and discussions; shows respect for peers.</td>
</tr>
<tr>
<td>4</td>
<td>Missed or was late for four or five classes; does not display a thorough knowledge of the readings and does not add to the discussion; little engagement in in-class activities and discussions; shows respect for peers.</td>
</tr>
<tr>
<td>2</td>
<td>Missed or was late for more than five classes; does not displays a knowledge of the readings and does not add to the discussion; no engagement in in-class activities and discussions; shows respect for peers.</td>
</tr>
<tr>
<td>0</td>
<td>Did not attend; does not discuss; shows no respect for peers.</td>
</tr>
</tbody>
</table>

**Final Project (55%)**

The final project for this class can be fulfilled in one of two ways: 1) Research Proposal OR; 2) Research Report. Instructions for these two forms, a rubric for how they will be graded, and examples of papers from previous semesters are provided in Canvas. All students should assess their own papers using the rubrics provided and turn these rubrics in with the final submission (a completed rubric will count towards the final grade). Also included in the rubric is participation in the class workshops.

- Final projects/proposals are due by 11:59pm on May 1st, 2015.
Topics and Readings Schedule

January 13, 2016 | Topics: Research Design, Levels of Measurement, Reliability and Validity

Required reading:

• Syllabus

Recommended reading:


January 20, 2016 | Topics: Research Questions, Probability, Hypotheticals and Significance

Required reading:

• Wildemuth, B. M. (2009). Developing a research question and Questions originating in library and information practice (Chapters 2 & 3). In Applications of social research methods to questions in information and library science. Westport, CT: Libraries Unlimited. [Do not post on the Wildemuth reading.]

Recommended reading:


January 27, 2016 | Topics: Research writing, Sampling

Required reading:

[no post due today, but you must print out and bring a copy of the Pyrczak chapters]

• Pyrczak, Chapters 4 & 5 [SKIM]

Recommended reading:

February 3, 2016  | Topics: Sampling, Collection and use analysis, Central Tendency and Dispersion

Required reading:


February 10, 2016  | Topics: Collection and use analysis, Visualization, Peer Review 1

Required reading:


Recommended reading:

- Checklist Method
- Collection Mapping
- Use Analysis
- Availability Analysis

February 17, 2016  | Topics: Informetrics, Correlation

Required reading:


Recommended reading:


*February 24, 2016* | Topics: Content Analysis, Inter-rater reliability

**Required reading:**


**Recommended reading:**


*March 2, 2016* | Topics: Observation, Clarification

**Required reading:**


**Recommended reading:**


*March 9, 2016* | Topics: Surveys, T-tests, Peer Review 2

**Required reading:**


Recommended reading:


**March 16, 2016**

**NO CLASS—SPRING BREAK**

**March 23, 2016** | Topics: Experiments and Quasi-experiments, Chi-square

Required reading:


Recommended reading:


**March 30, 2016** | Topics: Return on Investment/Outcomes-Based Evaluation, Peer Review 3

Required reading:


**April 6, 2016**  | Topic: Information Literacy Assessment, Clarification

**Required reading:**


**Recommended reading:**


**April 13, 2016**  | Topic: Final Peer Review, Other statistical tests

**Required reading:**


**Recommended reading:**


**April 20, 2016, April 27, 2016**

**FINAL PRESENTATIONS**