

**Meta-Analysis**  
**PRE 812 – Spring 2008**  
**Monday, 4:30 – 7:00 pm**  
**J.R. Pearson Hall – Room 204**

Instructor: Neal Kingston  
Office 1: 640 JRP  
E-Mail: [nkingsto@ku.edu](mailto:nkingsto@ku.edu)  
Phone: 785-864-9705  
Office Hours: Monday 3:00 – 4:00 pm, walk-in, or by appointment

**Text**

Lipsey, M.W. & Wilson, D.B. Practical meta-analysis. Applied Social Research Methods Series Volume 49. (2001). Thousand Oaks, CA.: Sage Publications

The text will be supplemented by readings which will be posted on Blackboard.

**Context of Course within the School of Education Mission**

The primary mission of the School of Education is to prepare leaders in education and human services fields. As stated in the School Code:

Within the University, the School of Education serves Kansas, the nation, and the world by (1) preparing individuals to be leaders and practitioners in education and related human service fields, (2) expanding and deepening understanding of education as a fundamental human endeavor, and (3) helping society define and respond to its educational responsibilities and challenges.

The components that frame this mission for our initial and advanced programs are Research and Best Practice, Content Knowledge, and Professionalism. These interlocking themes build our Conceptual Framework.

## **Purpose of This Course**

The purpose of this course is to prepare graduate students to conduct and interpret both fixed and random effects meta-analyses.

## **Broad Course Objectives**

- Students will learn how to conduct a comprehensive review of literature using electronic databases and backward and forward search techniques.
- Students will learn how to calculate different kinds of effect sizes and the relationships among different effect size measures.
- Students will learn how to code their data in ways that will illuminate variables not addressed explicitly in their primary research sources.
- Students will learn about statistical artifacts that impact meta-analytic results, how to determine if such artifacts are likely problematic in their data, and how to adjust for or otherwise address these issues.
- Students will learn how to compute statistics necessary for fixed and random effects meta-analyses.
- Students will learn how to present meta-analytic results.
- Students will submit for conference presentation and/or publication in a peer reviewed journal a meta-analysis that they conduct for this course.

## Syllabus PRE 812 – Meta-Analysis (Spring 2008)

	Date	Topic
1	January 21	No Class – Martin Luther King Day
2	January 28	Why do a quantitative synthesis of past research? History of meta-analysis Laboratory Task 1 – Exploring a multiple study dataset Assignment 1 – Identify, review and critique an existing meta-analysis (study must be identified by February 4, review and critique due April 7) Assignment 2 – Identify your research topic and perform a meta-analysis (topic must be identified by February 11, report due April 28)
3	February 4	Problem identification and study retrieval (Lipsey & Wilson, Chapter 2) Laboratory task 1 is due Assignment 1 study identification is due.
4	February 11	Selecting, Computing, and Coding Effect Sizes (Lipsey & Wilson, Chapter 3, Appendix B) Meta-analysis research topic identification is due.
5	February 18	Developing a coding scheme and coding study reports (Lipsey & Wilson, Chapter 4) Data management (Lipsey & Wilson, Chapter 5)
6	February 25	Analysis issues and strategies (Lipsey & Wilson, Chapter 6) Computational techniques for meta-analysis data – fixed effects models (Lipsey & Wilson, Chapter 7) Laboratory Task 2 – Computing a fixed effects meta-analysis
7	March 3	Computational techniques for meta-analysis data – random effects models (Lipsey & Wilson, Chapter 7) Laboratory task 2 is due Laboratory Task 3 – Computing a random effects meta-analysis
8	March 10	Interpreting and using meta-analysis results (Lipsey & Wilson, Chapter 8) Laboratory task 3 is due
9	March 17	No Class – Spring Break
10	March 24	No Class – AERA/NCME Conference
11	April 7	Student presentations reviewing and critiquing published meta-analyses
12	April 14	Ongoing review and consultation on student meta-analysis projects
13	April 21	Ongoing review and consultation on student meta-analysis projects
14	April 28	Ongoing review and consultation on student meta-analysis projects
15	May 5	Student presentations of their meta-analyses

## Evaluation Activities

The five evaluated activities are listed below, including their weight in the determination of your final grade.

Laboratory assignment 1	Exploring a multiple-study dataset	5%
Laboratory assignment 2	Computing a fixed effect meta-analysis	5%
Laboratory assignment 3	Computing a random effect meta-analysis	5%
Assignment 1	Review and critique an existing meta-analysis	15%
Assignment 2	Perform and present a meta-analysis	70%

## Grading Criteria

93-100%	= A
89-92%	= A-
85-88%	= B+
81-84%	= B
77-80%	= B-
73-76%	= C+
69-72%	= C
65-68%	= C-
60-64%	= D
<60%	= F

## Policies

- Cheating:** Any student found cheating will be given a 0 for that exam/project/assignment and reported to the Academic Dishonesty Committee.
- Assignments:** Students are expected to work by themselves. Any use of the ideas of another work must be cited appropriately. Any words of another should be clearly shown as such. Any degree of plagiarism is unacceptable and will be treated as cheating.
- Attendance:** All students are encouraged to attend class regularly, but attendance is not mandatory. You do NOT need to notify me of absences, except for the midterm and final.
- Accommodations:** The staff of Services for Students with Disabilities (SSD), located in Strong 135, coordinates accommodations and services for KU courses. If you want accommodations and have not yet contacted them, please do so as soon as possible. Please also see me privately if you think accommodations are desirable.
- Blackboard:** I will use Blackboard to share notes and data and create discussion groups.

## **Meta-Analysis Assignment**

You need to identify a research topic of interest to you and for which you can find a minimum of ten studies that provide effect sizes that can be used in a meta-analysis. An area of research with 30 or more studies with effect sizes is preferable. Your meta-analysis should be done sufficiently well to be accepted for publication in a peer reviewed journal.