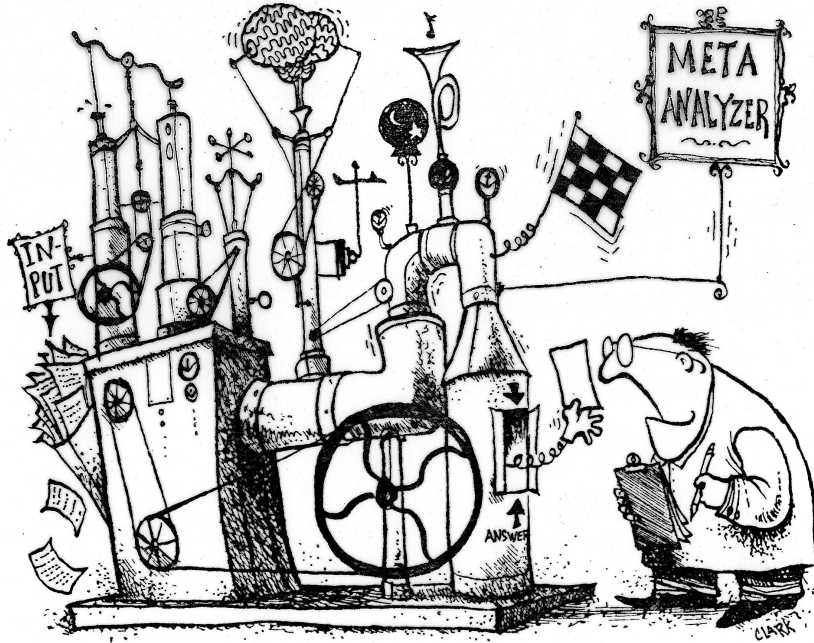


- Meta-Analysis (COMM 8801; #32525) –  
Spring Semester 2017  
Tuesday & Thursday 9:35 - 10:55 AM  
3116 Derby Hall



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### **Course Description**

The word “meta-analysis” literally means “analysis of analyses.” A meta-analysis is a quantitative literature review that combines the analyses of studies conducted on the same topic. Conducting a meta-analysis involves seven steps:

- (1) Formulating the problem
- (2) Searching the literature
- (3) Gathering information from studies
- (4) Evaluating the quality of studies
- (5) Analyzing and integrating the outcomes of studies
- (6) Interpreting the evidence
- (7) Presenting the results

Students enrolled in this class will receive hands on experience in conducting a meta-analysis on a topic of their choice. Please bring your laptop to class each day. Each



student will present their meta-analysis as a brief (10-minute) in-class PowerPoint presentation and as a brief (15-page) final manuscript.

### **Learning Objectives**

- (1) Students will be able to formulate a topic to conduct a meta-analysis on.
- (2) Students will be able to conduct a literature review to collect relevant studies for their topic.
- (3) Students will be able to code relevant variables from the studies they retrieve.
- (4) Students will be able to evaluate the quality of the studies they retrieve.
- (5) Students will be able to meta-analyze the effects from the studies they retrieved.
- (6) Students will be able to interpret the meta-analytic results.
- (7) Students will be able to present their meta-analytic results, both as an oral presentation and as a written manuscript.

### **Required Testbooks**

Hunt, M. (1997). *How science takes stock: The story of meta-analysis*. New York: Russell Sage Foundation. ISBN-13: 978-0871543981; ISBN-10: 0871543982

Cooper, H. (2016). *Research synthesis and meta-analysis: A step-by-step approach* (5<sup>th</sup> edition). Thousand Oaks, CA: Sage. ISBN-13: 978-1483331157; ISBN-10: 1483331156

### **Recommended Textbook**

American Psychological Association (2009). *Publication manual of the American Psychological Association* (6<sup>th</sup> ed.). Washington, DC: Author. ISBN-13: 978-1433805615; ISBN-10: 1433805618

### **Readings**

I will also supplement the textbooks with readings that discuss important concepts that are not included in the textbooks. Please read the assigned readings listed on the tentative schedule BEFORE you come to class. The readings are:

- Baumeister, R. F., & Leary, M. R. (1997). Writing narrative literature reviews. *Review of General Psychology*, 1(3), 311-320. doi:10.1037/1089-2680.1.3.311
- Bem, D. J. (1995). Writing a review article for Psychological Bulletin. *Psychological Bulletin*, 118(2), 172-177. doi:10.1037/0033-2909.118.2.172
- Prentice, D. A., & Miller, D. T. (1992). When small effects are impressive. *Psychological Bulletin*, 112(1), 160-164. doi:10.1037/0033-2909.112.1.160
- Rosenthal, R. (1995). Writing meta-analytic reviews. *Psychological Bulletin*, 118(2), 183-192. doi:10.1037/0033-2909.118.2.183

### **Software**

In this class we will use Comprehensive Meta-Analysis software.  
<http://www.meta-analysis.com/>

Comprehensive Meta-Analysis (CMA) software has been developed over the past 25 years by a team of meta-analysis experts with funding from several federal grants. The software is powerful, yet user friendly. It will work on either a PC or Macintosh computer. On Mac computers, CMA requires PC software (e.g., Parallels, CrossOver Mac, Virtual PC for Mac, VirtualBox, Boot Camp).



There is a FREE 10 days/10 trials CMA license. However, the students who take this class are eligible for a FREE 4-month license. You can email the software developer to get an unlock code <shirley@powerandprecision.com>. Please make sure you include in the email your name, the 7-digit number necessary to get the unlock code, and that you are a student in my class. If you later want to purchase a 1-year license, there is a student discount.

- Lite version: \$125
- Standard version: \$175
- Professional version: \$195

### **Grading**

There will be no exams. Grades will be based on seven assignments. There are 200 points possible:

Assignment 1: Problem definition (5 points)

Assignment 2: Literature search (10 points)

Assignment 3: Coding sheet and guide (10 points)

Assignment 4: Inter-coder reliability (25 points)

Assignment 5: Meta-analytic results (25 points)

Assignment 6: PowerPoint presentation (25 points)

Assignment 7: Final manuscript (100 points)

Grades will be assigned using standard percentages, although a curve might be applied if grades are too low:

A: 93-100%	B: 83-86%	C: 73-76%	D: 60-66%
A-: 90-92%	B-: 80-82%	C-: 70-72%	E: < 60%
B+: 87-89%	C+: 77-79%	D+: 67-69%	



### TENTATIVE SCHEDULE

MONTH	DAY	TOPIC	READING	ASSIGNMENT
JAN	10	Overview of course; introduction to meta-analysis	Hunt (1997) book Cooper (2016) Ch. 1	
	12	Step 1: Formulating the problem	Cooper (2016) Ch. 2	
	17	Step 2: Searching the literature	Cooper (2016) Ch. 3	Assign 1: Problem definition
	19	PRISMA Flow Diagram		
	24	Step 3: Gathering information from studies	Cooper (2016) Ch. 4	Assign 2: Literature search
	26	Developing a coding guide		
	31	Training coders; inter-coder reliability		
FEB	2	Unit of analysis and correlated effects		Assign 3: Coding sheet & guide
	7	Step 4: Evaluating the quality of studies	Cooper (2016) Ch. 5	
	9	Threats to the validity of a research synthesis conclusions	Cooper (2016) Ch. 9	
	14	Step 5: Analyzing and integrating the outcomes of studies	Cooper (2016) Ch. 6	Bring packet of materials for Assign 4 to class
	16	Comprehensive meta-analysis	CMA manual	
	21	Missing data		
	23	Fixed- and random-effects analyses		
	28	Graphical presentation of meta-analytic results		Assign 4: Intercoder reliability
MAR	2	Publication bias		
	7	Unit of analysis and correlated effects		
	9	When small effects are impressive	Prentice & Miller (1992)	
	14	<b>NO CLASS: SPRING BREAK</b>		
	16	<b>NO CLASS: SPRING BREAK</b>		
	21	Step 6: Interpreting the evidence	Cooper (2016) Ch. 7	
	23	Sensitivity analyses		
	28	Specification and generalization		



	30	Substantive interpretation of effect sizes		Assign 5: Meta-analytic results
APR	4	Step 7: Presenting the results	Cooper (2016) Ch. 8	
	6	Tables and figures in manuscripts		
	11	Writing meta-analytic and narrative review papers	Bem (1995); Rosenthal (1995); Baumeister & Leary (1997)	Assignment 6: PowerPoint presentation
	13	Class PowerPoint presentations		
	18	Class PowerPoint presentations		
	20	Class PowerPoint presentations		
MAY	1	<b>FINAL EXAM: 8:00 – 9:45 AM</b>		Assignment 7: Final manuscript due by 9:45 AM

Sexual misconduct/relationship violence: *"Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at [titleix@osu.edu](mailto:titleix@osu.edu)"*

Academic Misconduct: *"It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the **Code of Student Conduct** at <http://studentconduct.osu.edu>"*

Disability Services: *"Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 292-3307, TDD 292-0901, VRS 429-1334; <http://www.ods.ohio-state.edu/>*