

PSYCHOLOGY 895

I/O RESEARCH METHODS

Spring 2016, 3 credits | Discussion: W, 10:00AM – 12:50PM, Mills Godwin 221

Instructor: Richard N. Landers, Ph.D.

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Off. Hours: By Appointment (e-mail me!)

Prerequisites: Graduate classification in a Psychology Ph.D/Master's program at ODU
or approval of the instructor

Recommended: PSYC 763/863 (Personnel Psychology), PSYC 750/850 (Organizational Psychology), and
PSYC 745/845 (Psychometrics)

Course Description

I/O Research Methods builds knowledge and skills related to the application of statistics and research methods to both the study and practice of I/O Psychology. The topics that form this knowledge are split across three units of study: meta-analysis, general applied methods, and fairness and bias models and statistical tests.

Learning Objectives

- To understand the capabilities and limitations of null hypothesis significance testing.
- To apply the theoretical foundations of meta-analysis in order to conduct a meta-analysis.
- To accurately critique the methods adopted in existing meta-analyses.
- To communicate the value of organizational interventions in dollars.
- To apply general statistics, research methods, and psychometric theory to I/O psychology.
- To apply the theoretical basis for fairness and bias to actual selection data.

Required Materials

- 1) Reliable, convenient Internet access. All articles and project assignment documents will be posted on Blackboard for ease of access.
- 2) Schmidt, F. L. & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Newbury Park, CA: Sage.

Assessment and Evaluation

Semester Grade

		Points	% Grade
Homework	1 Meta-Analytic Ideas	50	5%
	2 Coding Sheet, Partners	50	5%
	3 Meta-Analytic Critique	50	5%
	4 Initial Scale Development	50	5%
Project	1 Scale Validation and Revision	100	10%
	2 Test Manual Critique	100	10%
	3 Determining Utility	100	10%
	4 Legality Evaluation	100	10%
	5 Meta-Analysis Presentation	200	20%
Participation		200	20%
Total		1000	100%

Homework and Projects

Four small homework assignments and five larger projects will be assigned throughout the semester. Except for the Meta-Analysis Presentation, each will be assigned and discussed the week before it is due. Most will be discussed during class in the week it is due. Reports will generally be sufficient at 10-15 pages, but may be longer or shorter if justifiable. These reports should be written with an I/O Ph.D.-level audience in mind. Complete instructions for each will be posted with each week's material on Blackboard.

Students are not to communicate with each other whatsoever about any project until it is due, which is always the beginning of class on the date it is due. A brief description of each project will follow:

Homework 1: Meta-Analytic Ideas. For this homework, you must turn in three ideas for the meta-analysis that you would like to conduct for your term project. To do this, write 250-500 words on each. Be prepared to discuss these topics in the class on the due date.

Homework 2: Coding Sheet, Partner, Critique Prep. For this homework, you must turn in 1) a completed coding sheet for your meta-analysis, 2) the name of your coding partner for your meta-analysis, and 3) a PDF containing the meta-analysis that you would like to critique for Homework 3. This PDF will be shared with the full class.

Homework 3: Meta-Analytic Critique. For this homework, you will turn in a 500-word minimum critique of the meta-analytic method used in your chosen critique article. You will also discuss your findings in class on the due date.

Homework 4: Initial Scale Development. For this homework, you will turn in a list of 20 draft questions to assess your construct of interest. We will share this among the group in class on the due date.

Project 1: Scale Validation and Revision. Based upon the results of Homework 4, you will conduct a validation study using an mTurk (or as a backup, your Facebook network) sample. As of the due date, you will write up a methods and results section (500-1000 words) describing the decisions you made to develop your final scale. You will also prepare a handout or PowerPoint presentation summarizing the analyses you ran, the decisions you made, and the final set of items you chose.

Project 2: Test Manual Critique. While practicing personnel psychology, you will likely be asked about your opinion on the quality of a particular selection device. For this project, as part of your position in a practicing personnel psychology firm, you are given the test manual of a selection device used by a current client in order to evaluate its psychometric properties. You will write a report for your firm and discuss your findings in class on the due date.

Project 3: Determining Utility. One of the most difficult aspects of integrating the scientifically recommended selection systems from personnel psychology is justifying the often greater cost of using such systems. In this project, you will be given a short description of a company and the selection system they currently use. Your consulting firm's CEO already presented them with brief descriptions of several options for new systems, and they would like to hear the pros and cons of each. You will write a report for your firm and for the client organization.

Project 4: Legality Evaluations. A large organization is worried about a lawsuit claiming discrimination on a protected class. They have asked your firm to take a look at their new selection system and devise a defensible selection system using their current set of predictors. You will write a report for your firm and give an executive summary to the client organization.

Project 5: Meta-Analysis Presentation. You will provide a SIOP symposium-style presentation on your meta-analytic project. You will have only 12 minutes to present (hard limit), and should spend a greater-than-usual amount of time on the methods and analyses of your project.

Participation

As a discussion-based course, you are expected and encouraged to actively participate when discussing each and every topic. You will be evaluated on both quality and quantity of comments during discussions.

Course Policies

The following policies were written to ensure fair, reasonable, and equitable guidelines in the classroom. These policies are inflexible and non-negotiable and should be referenced should special circumstances arise.

1. *Accommodation for persons with special needs:* In compliance with the Americans with Disabilities Act (1990), students with any documented disabilities are eligible for reasonable and appropriate accommodations in this class. A number of accommodations can be made in class if this applies to you. Please contact me as soon as possible if you need special accommodations for this course.
2. *Attendance:* Class attendance is not explicitly required except on days with homework or project due dates, but you must actively participate on every day in order to obtain the maximum possible participation grade. The textbook for this course only covers meta-analysis, and as such, virtually all the value of this course comes through active participation regarding assigned readings. It is in your best interest to learn as much as you can in order to be a well-rounded I/O psychologist. Any changes to the syllabus, schedule, or grading will also be announced in class.
3. *Policies and penalties for late work:* For all assignments, you will receive 25% off your grade each day that it is not turned in. No exceptions. If you are unable to meet a deadline for any reason, you must notify me **as soon as possible**.
4. *Incompletes:* Incompletes will only be granted in the case of medical or personal emergencies. Incompletes can also only be granted if 80% of the total course time has elapsed and you have a passing grade. Contact me as soon as you suspect you might need to take an incomplete in the course. See <http://www.odu.edu/academics/academic-records/grades/incompletes-withdraws-zgrades> for more detail.
5. *Classroom conduct:* All persons have the right to a civil, productive, and stimulating learning environment. As such, in this classroom, we have the responsibility of respecting the rights, opinions, and environment of others. Anyone whose behavior is disruptive to others will be asked to leave. In addition, a student whose behavior suggests the need for counseling or other assistance might be referred to the University's Counseling Services. Any student who violates the University's Code of Student Conduct might be referred to the Director of the University Counseling Office. Finally, to minimize classroom interruptions, please turn off all cell phones and pagers before class. If you have a legitimate reason for needing one of these devices during class, please see me.
6. *Academic integrity:* Neither plagiarism nor cheating of any kind will be tolerated in this course. You are responsible for doing all written work independently, without unauthorized collaboration, inadequate citation, or plagiarizing. (Plagiarizing includes duplicating another student's written work.) Any incidents of plagiarism or cheating will be dealt with severely, potentially including automatic failure of this course, a permanent notation on your transcript of "Academic Dishonesty," and/or dismissal from the university. See <http://www.odu.edu/about/monarchcitizenship/student-conduct> for more details.
7. *Sexual harassment:* Sexual harassment is defined as ANY unwelcome sexual advance, request, or verbal or physical conduct of a sexual nature. University policy prohibits sexual harassment in any form. Concerns or complaints about sexual harassment should be directed to any member of ODU's Committee on Sexual Harassment: see <http://www.odu.edu/equity> for more detail.
8. *Disability:* Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester.

895: Spring 2016 Schedule

	Date	Ref #	Topic	Due
	13-Jan	-	Introduction / Topic Discussion	
Meta-Analytic Methods	20-Jan	MA1	Null Hypothesis Significance Testing (NHST)	
	27-Jan	MA2	Introduction to Meta-Analytic Methods	
	3-Feb	MA3	Bare-Bones Meta-Analysis	<i>Homework 1: Meta-Analytic Ideas</i>
	10-Feb	MA4	Psychometric Meta-Analysis	<i>Homework 2: Coding Sheet, Partner, Critique</i>
	17-Feb	MA5	Other Considerations in Meta-Analysis	<i>Homework 3: Meta-Analytic Critique (Presentation)</i>
	24-Feb	AM1	Theory, Constructs, and Aggregation	<i>Homework 3: Meta-Analytic Critique (Written)</i>
Applied Research Methods	2-Mar	AM2	Lab vs. Field, Experiments vs. Quasi-Experiments	
	9-Mar	-	Spring Break	
	16-Mar	AM3	Scale Development and Validation	<i>Homework 4: Initial Scale Development</i>
	23-Mar	AM4	Preparing and Cleaning Data	<i>Project 1: Scale Validation and Revision</i>
	30-Mar	AM5	Communicating Value with Utility	<i>Project 2: Test Manual Critique</i>
	6-Apr	FB1	Fairness and Bias Overview and Models	<i>Project 3: Determining Utility</i>
Fairness and Bias	13-Apr	FB2	Testing for Adverse Impact, Predictor Selection	
	20-Apr	FB3	Case Study Day (Nassau County and DeStefano)	<i>Project 4: Legality Evaluation</i>
	29-Apr (8:30AM)	-	Presentation Day	<i>Project 5: Meta-Analysis Presentation</i>