

Syllabus for “Methodology and ethical issues of psychological studies”

Lecturer:

Joachim Kowalski, PhD (jkowalski@psych.pan.pl; office hours: upon arrangement)

Course duration:

30 hours

Teaching method and form of delivery:

seminar in the classroom

Time and place:

Summer semester 2025/2026, Institute of Psychology, PAS (ul. Stefana Jaracza 1)

Ten 3-hour meetings from February 18th onwards, 9:30-11:00 in the Seminar room.

Course description:

The course will be devoted to topics related to methodology and research methods in psychology. We will cover a wide range of subjects, from the philosophical underpinnings of the scientific method, variable operationalization and research design, and the principles of statistical data analysis to the recent challenges regarding the reproducibility of research results. The ethical questions in conducting psychological research will also be discussed. The class form will be a seminar; the lecturer will deliver presentations on the topic, but the students are expected to participate in discussions and exercises and also prepare presentations on a relevant topic (see below).

Learning outcomes:

After completing this course, the Student:

Knowledge:

- Knows and understands the basic principles of the scientific method (P8S_WG)
- Knows and understands how to use the scientific method in psychological research (P8S_WG)
- Knows and understands the rules for dissemination of scientific results, including through open-access (P8S_WG)

- Knows and understands ethical considerations regarding psychological research, including the context of replicability crisis (P8S_WK)
- Knows and understands the process of knowledge aggregation in psychological research (P8S_WG)

Skills:

- Is able to define the aim and subject of the research, formulate a research hypothesis, operationalize variables, choose a sampling method, study design and analytic framework, draw conclusions on the basis of research results (P8S_UW)
- Is able to create queries related to relevant research questions, systematically search for published research and synthesize found results (P8S_UW)

Social competences:

- Is ready to critically evaluate the achievements of psychological research (P8S_KK)
- Is ready to recognize the value of the scientific method in solving cognitive and practical problems (P8S_KK)
- Is ready to uphold ethical standards in conducting research (P8S_K and P8S_KO)

Class schedule:

The course is divided into ten 3-hour meetings. Meetings will be held in the Institute of Psychology seminar room on Wednesdays at 9:30 am.

Class no	date	Topic/subject	Presentation papers
1.	18.02	Scientific method and research process	none
2.	TBA	Ethics in research	https://www.apa.org/ethics/code/ethics-code-2017.pdf
3.	TBA	Developing research ideas and formulating hypotheses	Scheel, A. M., Tiokhin, L., Isager, P. M., & Lakens, D. (2021). Why hypothesis testers should spend less time testing hypotheses. <i>Perspectives on Psychological Science</i> , 16(4), 744-755.
4.	TBA	Operationalization and measurement of variables	McNeish, D., & Wolf, M. G. (2020). Thinking twice about sum scores. <i>Behavior research methods</i> , 52, 2287-2305.
5.	TBA	Sampling methods	Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. <i>Behavioral and brain sciences</i> , 33(2-3), 61-83.

6.	TBA	Study designs 1: Cross-sectional, longitudinal and other designs	Grosz, M. P., Rohrer, J. M., & Thoemmes, F. (2020). The taboo against explicit causal inference in nonexperimental psychology. <i>Perspectives on Psychological Science</i> , 15(5), 1243-1255.
7.	TBA	Study designs 2: Experimental and quasi-experimental designs	Boot, W. R., Simons, D. J., Stothart, C., & Stutts, C. (2013). The pervasive problem with placebos in psychology: Why active control groups are not sufficient to rule out placebo effects. <i>Perspectives on psychological science</i> , 8(4), 445-454.
8.	TBA	Statistical analyses	Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. <i>Frontiers in psychology</i> , 4, 863.
9.	TBA	Knowledge aggregation – systematic review and meta-analysis	Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., ... & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. <i>Annals of internal medicine</i> , 151(4), W-65.
10.	TBA	Replicability crisis and open science	Ioannidis, J. P. (2005). Why most published research findings are false. <i>PLoS medicine</i> , 2(8), e124.

Assessment, grading and attendance:

To pass the course, students are required to:

1. Attend the classes (possibility of 1 unexcused absence)
2. Prepare and deliver one or two presentations (see column “presentation papers” above)
3. Pass a short final exam

Grades will be based on the result of the final exam (100% of the grade), but only after meeting prerequisites to pass the course (attendance and presentation).

Grading:

91-100% - 5

81-90% - 4.5

71-80% - 4

61-70% - 3.5

51-60% - 3

0-50% - 2

Reading list:

Students will be required to do some reading for each class – a chapter or a paper. Sample readings:

Borkovec, T. D., & Sibrava, N. J. (2005). Problems with the use of placebo conditions in psychotherapy research, suggested alternatives, and some strategies for the pursuit of the placebo phenomenon. *Journal of clinical psychology, 61*(7), 805-818.

Borsboom, D., Mellenbergh, G. J., & Van Heerden, J. (2003). The theoretical status of latent variables. *Psychological review, 110*(2), 203.

Cooper, H. E., Coutanche, M. N., McMullen, M. L., Panter, A. T., Rindskopf, D. & Sher, K. J. (2023). *APA handbook of research methods in psychology, Vol 1: Foundations, planning, measures, and psychometrics*. American Psychological Association.

Lakens, D. (2017). Equivalence tests: A practical primer for t tests, correlations, and meta-analyses. *Social psychological and personality science, 8*(4), 355-362.

Nosek, B. A., Alter, G., Banks, G. C., Borsboom, D., Bowman, S. D., Breckler, S. J., ... & Yarkoni, T. (2015). Promoting an open research culture. *Science, 348*(6242), 1422-1425.

Perugini, M., Gallucci, M., & Costantini, G. (2018). A practical primer to power analysis for simple experimental designs. *Revue Internationale de Psychologie Sociale, 31*(1), 1-23.

Rohrer, J. M., Hünermund, P., Arslan, R. C., & Elson, M. (2022). That's a lot to PROCESS! Pitfalls of popular path models. *Advances in Methods and Practices in Psychological Science, 5*(2), 25152459221095827.

Watts, S. E., Turnell, A., Kladnitski, N., Newby, J. M., & Andrews, G. (2015). Treatment-as-usual (TAU) is anything but usual: a meta-analysis of CBT versus TAU for anxiety and depression. *Journal of affective disorders, 175*, 152-167.

Note: this is a preliminary syllabus; it is subject to change