Good Scientific Practice

Welcome to the Ph.D. workshop Good Scientific Practice. I have designed this syllabus to help you understand which topics and important questions we will consider in this class.

Information

Class:	Good Scientific Practice
Term:	Autumn Semester 2026
Dates:	Thursday 8th October 2026 09:00–17:00
Room:	FAB | 2.05
Office Hours:	Email to arrange
Me:	Dr. Mike Cowburn (he/him)
Email:	mike.cowburn@zu.de
You:	Who you are isn't defined by records or bureaucracies, so if you prefer a name or a pronoun other than the one listed, please let me know.

Course Description

This workshop introduces doctoral researchers to the principles and norms of good scientific practice as the foundation of credible, transparent, and reproducible research. Scientific knowledge rests on trust, both among researchers and between scholars and the public, and this trust depends on shared standards of transparency and reproducibility. The workshop approaches good scientific practice not merely as a set of formal rules, but as an evolving professional ethos that underpins scientific progress across the social sciences.

A central focus of the workshop is helping Ph.D. students navigate the boundaries between acceptable research practices, questionable research practices, and scientific misconduct. Doctoral researchers frequently encounter ambiguous situations involving data management, authorship, citation, replication, and publication strategies, often under conditions of time pressure and career uncertainty. Through structured discussion the workshop equips participants to recognize ethical dilemmas early and to make principled decisions grounded in disciplinary norms and institutional guidelines.

The workshop places particular emphasis on responsible research workflows, including data management and documentation, analytical transparency, and reproducibility. Participants will engage with best practices in research design, data storage, replication files, and data sharing, as well as with issues surrounding researcher positionality, robustness checks, and pre-registration. Particular attention is given to contemporary social science research practices, such as collaborative projects, large-scale data processing, and the responsible use of computational and AI-assisted research tools.

Beyond integrity in research design and analysis, the workshop addresses the practical mechanics of academic publishing and scholarly communication. Participants will learn how to identify appropriate journals, prepare and submit manuscripts, understand editorial decision-making and peer review, and respond constructively to reviewer reports. The course also discusses differences between journal and book publishing, effective conference participation, and strategies for presenting research to both academic and broader audiences, including the responsible use of digital platforms for research dissemination.

Finally, the workshop situates individual researcher conduct within the broader structural conditions of academic careers in Germany and internationally. It examines incentive structures such as publication metrics, third-party funding, evaluation systems, temporary employment, and mobility expectations, and considers how these conditions shape both opportunities and ethical risks. By linking questions of scientific integrity with career strategy and professional development, the workshop encourages participants to develop realistic, reflective approaches to pursuing academic careers while upholding high standards of good scientific practice in real-world academic settings.

Audience

This workshop is designed for doctoral students, primarily in the social sciences, though doctoral students from other disciplines are also welcome.

Communication

For short questions, email is the best way to contact me. I endeavor to respond to all emails within twenty-four hours Monday to Friday, I will respond to most emails considerably

quicker than this. If I haven't responded within twenty-four hours, please feel free to email again.

If you wish to go over material covered in class, talk about connections between class material and other ideas, and so on, I will be happy to schedule time in my virtual office hours. Please email me to arrange. These discussions are generally student-led but I can help you formulate questions and point you in the direction of additional material for your term papers based on my sense of your strengths and interests. I encourage you to take advantage of this time and I will be flexible enough to accommodate most appointments.

I also encourage students to take advantage of my office hours to ask questions or discuss issues related to the course, the discipline of political science, or academia more generally. If you have any comments about or problems with the course itself, I encourage you to share them in my office hours.

Requirements

Students complete the requirement to take this course by actively participating in the one day eight-hour workshop that will take place in person from 09:00 until 17:00 on Monday 13th April. In-person attendance is mandatory. Students should bring their laptop to the workshop.

Workshop Structure

Below is our schedule for the workshop, all sessions will take place on Monday 13th April. We have eight sessions for an eight hour workshop, though we will spend more time on some sessions than others.

Session 1: Introduction

- Brief introduction of participants and their Ph.D. projects
- Objectives and structure of the workshop
- Expectations and participation norms

Session 2: Responsible Research Conduct

- Principles of good scientific practice
- Distinguishing acceptable practices, questionable research practices, and misconduct
- Disciplinary standards and institutional guidelines

- Criteria for authorship
- Citation practices, plagiarism, and self-plagiarism

Session 3: Data Management and Documentation

- Research design, data integrity, and transparency
- Data storage, documentation, and replication files
- Reproducibility and data-sharing norms in the social sciences

Session 4: Analysis, Transparency, and Reproducibility

- Analytical decision-making and researcher positionality
- Replication, robustness, and pre-registration
- Computational methods, automation, and use of AI tools

Session 5: Citation Best Practices

- Correct citation practices
- Direct and indirect quotes
- Self-plagiarism and self citation
- Citation management software

Session 6: Journals and Peer Review

- Identifying an appropriate journal
- Preparing and submitting your manuscript
- Understanding editorial decisions and the peer review process
- Writing cover letters and response memos
- Differences when publishing a book

Session 7: Communicating Research In-Person and Online

- Conferences: types, purposes, formats, and value
- Presenting research to academic audiences
- Using digital platforms to promote research
- Public engagement, outreach, and responsibility

Session 8: Structural Conditions and Academic Careers

- Career paths in academia in Germany and internationally
- Incentive structures: publications, funding, evaluations, and metrics
- Temporary employment, mobility expectations, and precarity
- Strategic decision-making under real-world constraints