

Responsible Use of Generative AI in Public Health Research

Facilitators

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Description

Generative AI is rapidly becoming part of research practice, creating new opportunities but also raising important questions around scientific integrity, privacy, bias, transparency, reproducibility and human responsibility.

This practical, interactive course explores the responsible use of generative AI through concrete Public Health research use cases. Working in groups, participants experiment with AI tools across research tasks and workflows, critically evaluate AI-generated outputs, identify appropriate safeguards and human oversight, and make informed decisions about when and how AI should - or should not - be used. The course also introduces emerging agentic AI workflows and their implications for research practice, skills and responsibilities.

Objectives

After completing the course, participants will be able to:

- explain the basic principles, capabilities and limitations of generative AI and emerging agentic AI workflows;
- apply selected generative AI tools and agentic workflows to concrete Public Health research tasks, and critically assess their benefits, limitations and risks;
- critically evaluate AI-generated outputs and identify appropriate verification methods, safeguards and human oversight;
- determine when and how generative AI can be responsibly used in research, considering the task, data sensitivity, potential consequences of error and accountability, and when its use should be restricted or avoided;
- design, document, disclose and critically assess a responsible AI-supported research workflow, with clear roles for AI and human researchers.

Dates

18 – 21 May 2027

Eligibility

SSPH+ IGC students and postdocs. External participants are welcome to apply.

Course Structure

Day 1 – Foundations: what generative AI and large language models are and how they work; capabilities, limitations and differences from other forms of AI and automation; Public Health opportunities and risks; introduction to agentic workflow.

Day 2 – Responsible use: privacy, confidentiality and safe use of data; bias and fairness; hallucinations; transparency and reproducibility; accountability, human oversight and the limits of delegation.

Day 3 – AI-supported research workflows: hands-on experimentation with selected generative AI tools across research tasks, including problem framing and research question refinement; AI-assisted literature exploration and the limits of AI for systematic and reproducible evidence searching; scientific writing; data analysis and coding; qualitative research support; prompting, verification and documentation;

Day 4 – From research workflows and publication: integrity, peer review and governance. Authorship and disclosure; citation integrity; confidentiality and appropriate AI use in peer review; governance and accountability; reproducibility; changing researcher skills, roles and risks of deskilling; participants' workflow presentations. Participants finalise and present their workflows.

Pre-requisites

No prior expertise in artificial intelligence, machine learning or programming is required. Participants should bring a research question, workflow or use case from their own field to work on during the course.

Assessment

Pass/fail, based on components:

- Group presentation of a Public Health research use case and proposed AI-supported workflow, including benefits, risks, safeguards, verification, documentation, human oversight and disclosure.
- Individual reflective note on how generative AI could responsibly be used in the participant's own research, and how privacy, scientific integrity, reproducibility and accountability would be addressed.
- Formative feedback is provided throughout via exercises, discussions, peer feedback and group work.

Credits

2 ECTS

Preliminary work: 6 h; Contact time: 24 h; Homework/Assignments: 20 h

Location

Swiss TPH, Kreuzstrasse 2, 4123 Allschwil

Course Fees

	2 ECTS
SSPH+ IGC PhD and MD Students	30 CHF
Postdocs from SSPH+ partner institutes with a SSPH+ Faculty Member as line manager	30 CHF
External PhD students, external MD Students, postdocs from SSPH+ partner institutes without a SSPH+ Faculty Member as line manager and Swiss Public Health Doctors in training	600 CHF
Others	1'600 CHF

Registration

<https://www.conftool.com/ssph-phd-courses2027/>

Deadline for registration

18 April 2027