INSTITUT FÜR ARGUMENTATIONS KOMPETENZ

Online course

Critical Reasoning and Logic

Target group	PhD students and postdocs
Course description	In science, thinking clearly and seeing the logical relationships between ideas is as important as are experiments and data. Nevertheless, the logical basics of correct reasoning are not part of the curricula for most university degrees. In this course we first introduce basic concepts of logic such as validity and soundness and the distinction between inductive and deductive reasoning. The idea of the course is to use these concepts as a toolbox for various aspects of scientific work. Participants get to know techniques that help them identify strengths and weaknesses in arguments, structure texts optimally, and to state arguments clearly and precisely.
Contents	• basic concepts of logic and argumentation theory • the logical structure of scientific texts and talks • common types of fallacies • tips and exercises for oral argumentation
Objectives	The participants... • learn to quickly identify strengths and weaknesses of arguments • learn to build valid and sound arguments • learn to break-down arguments into their logical structure • train analytical thinking
Methods	The methods are interactive throughout. The course includes extensive exercises that help the participants to apply the contents to their individual research projects.
One-on-one session with the trainer	In our online courses the participants get the chance to sign up for an individual meeting with the trainer after the course, in which they can get feedback and discuss one of their texts.
Format and software	For the course sessions we use Zoom. In addition, we set up a course page in Moodle where course materials and various exercises are provided for the participants.
Duration	2 days, 9 a.m. – 3 p.m. plus individual discussions after the course
Group size	Max. 12 participants

INSTITUT FÜR ARGUMENTATIONS KOMPETENZ

In-house course

Critical Reasoning and Logic

Target group	PhD students and postdocs
Course description	In science, thinking clearly and seeing the logical relationships between ideas is as important as are experiments and data. Nevertheless, the logical basics of correct reasoning are not part of the curricula for most university degrees. In this course we first introduce basic concepts of logic such as validity and soundness and the distinction between inductive and deductive reasoning. The idea of the course is to use these concepts as a toolbox for various aspects of scientific work. Participants get to know techniques that help them identify strengths and weaknesses in arguments, structure texts optimally, and to state arguments clearly and precisely.
Contents	• basic concepts of logic and argumentation theory • the logical structure of scientific texts and talks • common types of fallacies • tips and exercises for oral argumentation
Objectives	The participants... • learn to quickly identify strengths and weaknesses of arguments • learn to build valid and sound arguments • learn to break-down arguments into their logical structure • train analytical thinking
Methods	The methods are interactive throughout. The course includes extensive exercises that help the participants to apply the contents to their individual research projects.
Duration	2 days, 9 a.m. – 5 p.m.
Group size	Max. 12 participants