

Philosophy of Mathematical Practice

Thursdays, 11:35am–2:25pm, Leacock 927

DIRK SCHLIMM

Office: Leacock 916

Email: dirk.schlimm@mcgill.ca

Course description. Two broad strands can be distinguished in 20th century philosophy of mathematics: (1) a *mainstream* or *foundationalist* one that addresses traditional epistemological and metaphysical questions with regard to an idealized picture of mathematics as a collection of formal systems; and (2) a *quasi-empirical* or *marverick* strand that presents itself as an anti-foundationalist (and sometimes also anti-logicist) alternative to the mainstream approach. In more recent years, the latter strand has developed further and received more attention under the label of *philosophy of mathematical practice*, which emphasizes the shift of focus towards mathematics as it is actually done in a historical context by human agents. This approach is often intended to extend and complement the mainstream strand by addressing historical, cognitive, and social aspects of mathematics and adding topics, such as visualization, diagrammatic reasoning, the use of notations, fruitfulness, understanding, and explanation.

In this seminar we will try to get a better understanding about the question: What is philosophy of mathematical practice? This includes discussions about the nature of mathematical practices and methodologies for studying them. The readings will be comprised of seminal work in this tradition, such as papers published in Mancosu's *Philosophy of Mathematical Practice* (2008) and van Kerkhove's *New Perspectives on Mathematical Practices* (2009), as well as reflections on this tradition by contemporary writers.

Prerequisites. Seminars are open to graduate students and advanced undergraduate students, or by permission of the instructor.

Reading materials will be made available on myCourses.

Requirements & grading. It is required that students prepare for and attend the meetings, and participate in the discussions (missing more than 20% of the meetings without a medical note will result in a 1/3 grade penalty). Depending on the class size, participants will be required to lead one or more seminar meetings. This includes selecting suitable readings of source material, giving a 20-minute presentation at the beginning of the meeting, and leading the session. The *final grade* depends on weekly discussion notes (20%), in-class presentations (incl. selection of readings and leading the discussion) (30%), and a 4000–5000 word term paper (50%). Requests for extensions will be considered only when requested before the paper or discussion note is due,

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see <http://www.mcgill.ca/students/srr/honest> for more information).

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Instructor generated course materials (e. g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.

As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the Office for Students with Disabilities, 514-398-6009.