NEW COURSE

Math 19
Introduction to Set Theory

Winter Term 2020
12 period

Set theory is an interesting and beautiful area of mathematics in its own right. It is also central to the foundations of mathematics, and plays an important role in the history of philosophy, mathematics, and their interactions.

Math 19 introduces the axioms of set theory, the universe of sets, and set theory as a foundation for mathematics. It is a mathematics course, but touches briefly on historical and philosophical aspects of set theory. Topics covered include the algebra of sets, ordinals and cardinals, transfinite induction and recursion, and the axiom of choice.

Students will learn set-theoretical language and concepts used throughout mathematics, and will learn how to write mathematical proofs. This makes Math 19 excellent preparation for upper level mathematics courses.

This course is open to all students. There are no prerequisites except the willingness to learn how to write proofs. Math 19 carries QDS distributive credit and counts toward the math major.