



Elements of Set Theory Fall 2016

Course: Elements of set theory, MHF 4102 and MHF 5107, sections 3276 and 3277

Meeting time and place: LIT 0219, MWF 6th period

Instructor: Jindrich Zapletal

Office: 456 Little Hall, office hours MWF 9th period

Contact: zapletal@math.ufl.edu, 352-294-2343

Textbook: The corresponding chapters of the notes posted by the instructor.

Grading system: There will be four equally weighted take-home assignments (including a take-home final). Attendance will not be taken.

Contents of the course: The course is divided into four parts covered by the respective take-home assignments.

1. Axiomatics of set theory. We will go through the list of axioms of set theory with some historical discussion and justification.
2. Basic concepts. We develop natural numbers, the theory of finite sets and cardinality in the axiomatic framework. We state the Continuum Hypothesis and discuss the phenomenon of undecidability of mathematical questions.
3. Ordinal numbers. We define von Neumann's ordinal numbers and prove the transfinite induction and recursion theorems. We define cardinal numbers.
4. Topics. A brief introduction to Ramsey theory, descriptive set theory, other stuff depending on time.

Further administrative matters: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<http://www.dso.ufl.edu/scr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.