Course Description Math 116b will be focused on set theory. It will be largely independent from Math 116a, so one could take it without having taken 116a. It requires no essential prerequisites, except familiarity with somewhat abstract mathematical reasoning, at the level of a course like Math 5. Topics covered will include the ZFC axioms for set theory (with special attention paid to the Axiom of Choice), ordinals, cardinals, clubs, stationary sets, and other infinitary combinatorics. With any remaining time we will discuss Von Neumann's cumulative hierarchy and Gödel's constructible universe.

Ma 116c will build on this material, so students planning on taking 116c should take this course.

Policies

Grades: The grade for this course will be based on the homework assignments.

Homework Policy: In each homework there will be one starred problem on which no collaboration is allowed. For the other problems, collaboration is allowed but you should write up your own solutions. You cannot look up solutions to the problems from any source. No late submissions are allowed except for medical problems (note needed from the health center) or serious personal difficulties (note needed from the Dean's Office).

Texts There will be no textbook required for the course. If you like, the following books are good references (but again, not required):

H. Enderton, Elements of Set Theory.

K. Hrbacek and T. Jech, Introduction to Set Theory.

Y. Moschovakis, Notes on Set Theory.

E. Schimmerling, A Course on Set Theory