

MHF 3202 - SETS AND LOGIC SYLLABUS

INSTRUCTOR: Paul Robinson (paulr@ufl.edu)
CLASS ROOM: 205 Little Hall
CLASS TIME: MTuWThF period 3 (11:00-12:15)
OFFICE: 414 Little Hall (NE Corridor)
OFFICE HOURS: To be announced
TEXT: Richard Hammack, *Book of Proof* (third edition)

The material of this course is drawn from '*Book of Proof*', which the author has generously made available at no charge; for convenience, I shall post a copy of this text in the 'Files' section of the Canvas pages for the course and on my departmental course page. Of arguably greater importance in this course than the acquisition of mathematical 'facts' is the development of an approach to mathematics. A primary focus of the course will be rigour (with a secondary focus on rigor): we shall synthesize (build up) and analyze (break down) carefully constructed arguments, starting from explicit hypotheses and working with precise definitions; we shall also critique some not-so-carefully constructed arguments.

The Canvas pages for this course will host all of the course material. To be frank, the Canvas pages (make that 'page') will be quite minimalistic, with neither bells nor whistles. There will be no strict daily schedule posted at the start of semester; such a constraint would be antithetical to my philosophy. However, the following summary will give an idea of what to expect: during weeks 1 and 2 we shall discuss most of chapters 1 and 2 in Part I of the text; during weeks 3 and 4 we shall discuss most of chapters 4 through 10, which form Parts II and III of the text. During weeks 5 and 6 we shall discuss selected topics from Part IV of the text, the selection being guided in part by student interest. Note that during the first four weeks we shall be working more-or-less straight through the text from start to finish; 'what comes next' will always be clear. Lectures will be conducted in person and will be accompanied by notes posted to Canvas.

Homework for discussion will be also posted to Canvas and will be drawn from the odd-numbered questions in '*Book of Proof*'. These are not to be turned in; '*Book of Proof*' has answers to all of them, but some of them call for (and will receive) discussion in class. Grades will be based on performance in three equally-weighted tests, one of which will take place in class at the end of each even-numbered week. The grading scale will be more-or-less standard: A (90%), B(80%), C(70%), D(60%), with 4% increments for 'plus' grades and 3% decrements for 'minus' grades; for example, the B+ threshold is 84% and the A- threshold is 87%.