This course is meant to be a gentle introduction to the theory of operator algebras. We will start with a review of spectral theory followed by the basics of $C^*$-theory. After that, the content will depend on the participant's interests.

We will loosely follow Murphy’s text [3] — mostly because it is the only reasonable book on the subject in print. I will also draw on my own books [5, 6] as well as Arveson’s wonderful little book [1]. The class should be small enough that we can share these texts as “reserve” texts in the grad lounge in Kemeny.

Some preparation in analysis is essential, but anyone who has taken our functional analysis course, Math 113, should be very well prepared. We will try to develop most of the background we need, but it would be good to have either Conway’s book [2] or Pedersen’s Book [4] around.

Please come chat with me, or email me, if you’re interested, or might be interested, in the course. I’d like to get an idea of who’ll be in the course.

References


