


# Constructing the Real Numbers IBL-Style

 Friday, April 8, 2022

 10:30 AM - 11:00 AM

## Session

AMS Special Session on Inquiry-based Teaching and Learning

## Abstract

"Topics in Advanced Calculus" is a graduate course in my institution's Master of Arts in Teaching Mathematics program, primarily taken by current high school teachers and those interested in teaching at the community college level. The topic of the construction of the real numbers à la Edmund Landau's "Grundlagen der Analysis" is well suited for such an audience: the subject is quite accessible for students with varied backgrounds, but requires substantial abstract thinking. Its subject matter is a main object of school mathematics, and last not least, it is a perfect vehicle to introduce inquiry-based learning to current teachers. We will present examples of the course notes developed during several iterations of the course, explain the instructional mode, and report on instructor and student experiences and feedback. An additional twist: In Spring 2021, the course was taught asynchronously online using a bulletin board for student contributions and discussions.

## Presenting Author



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