

1135-G1-839

Nicholas Wasserman* (wasserman@tc.columbia.edu), **Keith Weber**, **Juan Pablo Mejia-Ramos** and **Tim Fukawa-Connelly**. *Designing Real Analysis courses for Secondary Mathematics Teachers*.

Real analysis is frequently a required course for prospective secondary mathematics teachers. However, most teachers view real analysis as unnecessary and unrelated to the work of teaching secondary mathematics. In accord with an instructional model for improving the teaching of advanced mathematics courses for teachers, we implemented a real analysis course that framed content by ‘building up from’ and ‘stepping down to’ teaching practice. In this session, we exemplify our approach with materials from two sample modules. These modules cover proofs of the algebraic limit theorems for sequences and of various derivative rules (e.g., product rule), and elaborate on connections made to secondary mathematics teaching. In addition, since we consider teachers’ mathematical knowledge primarily in relation to their own teaching practices, we report on data from subsequent classroom observations for six secondary teachers. The observation data provide evidence that what they learned from the real analysis modules was useful for informing their pedagogical practice. We discuss the instructional approach in this real analysis course and its potential implications for secondary mathematics teacher education. (Received September 15, 2017)