1163-97-871 Rachel Schwell* (schwellrac@ccsu.edu). Creating the Student You Want: Modeling Meta Goals through Inquiry in Proof-Based Courses.

Instructors of proof-based courses tend to teach the way we were taught: through watching an expert efficiently present previously-worked-out solutions. Yet how many of us simultaneously lament the unrealistic and misguided expectations many of our students seem to hold in the proving and problem-solving process? There are many aspects of successfully doing mathematics that many of us who chose to pursue higher-level math did not need to be explicitly taught; for example carefully parsing definitions, "playing around" with examples and non-examples, and most importantly, the understanding that the proving process is not linear, not algorithmic, and not fast. I venture that many if not most of our students will continue to miss these important aspects, which we will call "meta-goals", until our in-class approach itself models them. Together we will discuss and explore the meta-goal benefits of a more hands-off and student-led class structure in proof-based courses. For those looking for more detailed and personal guidance on implementing this type of approach, we will also discuss a national and regional NSF-funded community developed over the past two years aimed at expanding and supporting the use of inquiry-based approaches. (Received September 14, 2020)