

1106-N1-671 **Estrella MS Johnson*** (strej@vt.edu), 460 McBryde Hall, 225 Stanger, Virginia Tech,
Blacksburg, VA 24061. *Critical Components of Inquiry-Oriented Teaching*.

Over the last decade, undergraduate mathematics researchers and curriculum developers have generated inquiry-oriented curriculum materials for courses from calculus through abstract algebra. Here, we take inquiry-oriented to describe both the student and the teacher's role in the classroom. Students "learn new mathematics through inquiry by engaging in mathematical discussions, posing and following up on conjectures, explaining and justifying their thinking, and solving novel problems", while "teachers routinely inquire into their students' mathematical thinking and reasoning" (Rasmussen & Kwon, 2007, p. 190). The work represents our efforts to define and map the domains of inquiry-oriented teaching. Specifically, by drawing on empirical and theoretical research on inquiry-oriented teaching, and by analyzing classroom video data, we will present a list of critical components for inquiry-oriented teaching. These critical components will be illustrated and exemplified by analyzing inquiry-oriented classroom video data. (Received September 04, 2014)