1086-Q1-1173 **Gregory D. Foley*** (foleyg@ohio.edu), 117 McCracken Hall, Athens, OH 45701-2979. *Advanced Quantitative Reasoning: Mathematics, Statistics, and Modeling for College Readiness and Informed Citizenship.*

Advanced Quantitative Reasoning is an innovative course in mathematics, statistics, and modeling for high school students who have completed Algebra I, Geometry, and Algebra II or Integrated Mathematics I–III. The AQR course is designed to develop mathematical proficiency, statistical capability, and quantitative literacy—filling a critical gap in the nation's high school mathematics course offerings. The traditional core topics of high school mathematics—algebra, geometry, functions, and trigonometry—are combined with the new college and career readiness topics of quantitative reasoning, statistics, probability, and modeling. Motivating questions and engaging investigations are the heart of the course. The AQR course balances reasoning and sense making with communication and in-context problem solving. This talk presents rich tasks that high school seniors find engaging and that leverage mathematical action technologies and classroom discourse. These tasks have been classroom tested in technology-intensive learning environments focused on language, thinking, and learning. (Received September 19, 2012)