Jacksonville State University has joined the National Repository of Online Courses Pilot Research Project for Arithmetic with the goal of improving the success rate of students who are underprepared in mathematics. NROC is an open source program developed by the Monterey Institute for Technology and Education with funding support from The Bill and Melinda Gates Foundation. The pilot program uses case studies from high schools, community colleges, and universities throughout the United States. JSU’s participation began in the Fall 2011 semester with courses taught at Gadsden State Community College, our local partner institution, with plans to expand to both campuses in the Spring 2012 semester. NROC resources are being used to transform existing traditional basic mathematics courses into hybrid courses. Data to be examined includes course completion rates, pass rates, and test scores. ACT and Compass scores are used to control for the initial level of competency of the students. Online interviews with NROC researchers are used to examine changes in the attitude, persistence and competence of students experiencing the environment. Demonstration of the program and preliminary statistical analysis from JSU’s participation will be presented. (Received September 21, 2011)