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Jane P Coffee* (jane.coffee@csi.cuny.edu) and **Jesenko Vukadinovic**, College of Staten Island. *Using Data to Develop an Adaptive Syllabus for PreCalculus Course at the College of Staten Island, City University of New York.*

The central research question is how a data-driven curriculum and faculty development can improve student learning and success in the gateway course to most STEM majors, College Algebra and Trigonometry (average enrollment of 600 students in 15 sections per semester). In spring and fall 2010 approximately half the sections participated with the rest the control group. For all sections, the MAA Maplesoft tests were used to pre-test the students on the prerequisite topics at the beginning of the semester and post-test the students on the course topics at the end of the semester. The participating instructors developed an adaptive syllabus that contained the same required topics but the time allotment was at their discretion. These instructors used several tools to adapt their teaching: pre-test data provided an item-analysis of prerequisite topics that required additional attention; computer-based homework was assigned by instructors; and computer projects designed to bridge the gap between abstract math concepts and real-world applications. The participating instructors kept a log about their findings and adjustments made to the syllabus. Based on data, changes were made in the departmental syllabus and funding was provided for continued use of pre/post testing with MAA Maplesoft. (Received September 08, 2011)