

1086-VB-2400 **Samantha N Andrews*** (sandrews@gatech.edu), 791 Atlantic Drive/MiRC, Atlanta, GA 30332, and **Greg Mayer, Nathaniel Tindall, Daniel Connelly** and **Rui Hu**. *Development of an Online Multivariable Calculus Course for High School Students*. Preliminary report.

In this talk we will describe the development of a one semester online multivariable calculus course, with an engineering applications, for high school students that have completed AP Calculus BC. Particular challenges that were faced in the development process include the alignment of the Mathematics Common Core Standards for a two semester course to a one semester course, the inability to administer proctored exams, and a development timeline of only five months. These challenges were addressed through 1) the development of a problem based learning group project, 2) writing assessments that have students connect engineering to calculus concepts, 3) the use of open educational resources, and 4) the use of technologies and processes that enabled collaborative authoring, editing, and sharing of course materials and resources. As the course will be first offered in January 2013, how the researchers intend to evaluate the delivery of the course will also be discussed. (Received September 25, 2012)