

1077-VD-2652 **Alina N. Duca*** (anduca@ncsu.edu), NC State University, Box 8205, Raleigh, NC 27695, and
Dianne Raubenheimer and **Hatice Ozturk**. *Bridging mathematics concepts to engineering contexts: Just-in-time review modules*. Preliminary report.

The mathematical education of the engineering undergraduates essentially consists of the students assimilating a large collection of 'methods' and 'techniques' which later on in their education and profession should enable them to understand and solve advanced engineering problems. The continuous assessment process performed by the mathematics department shows that the majority of engineering students have mastered core concepts outlined by the course outcomes. However, engineering educators consistently face a two-fold 'mathematics problem'. On one hand, they are dealing with the fact that students easily forget material from one year to another and do not recognize the extent of what they have forgotten. This is further complicated by the fact that students tend to focus on the immediate assessment and often do not clearly understand, at the time they were taught, how the mathematics relates to their field of study. In this talk we present an overview of the proposed solution to this broad problem encountered across engineering disciplines. Faculty from the Mathematics Department and various Engineering Departments collaborated on integrating the relevant mathematical content into specific applied engineering contexts while students take the required engineering courses. (Received September 22, 2011)