Jose H. Giraldo* (jose.giraldo@tamucc.edu), Mathematics and Statistics Dept., Texas A&M University-Corpus Christi, 6300 Ocean Dr, Corpus Christi, TX 78412. Discussion and Revisiting of Calculus Concepts to Gain Understanding of Main Concepts. Preliminary report.

Several years ago I decided to change the approach to teach calculus concepts as well as the sequence of topics to help the students in their learning and enduring understanding of the basic concepts from calculus I. This change led to reconsider the study of calculus by emphasizing the understanding of the discrete to better understand the reasoning in the continuous. Due to this approach a main discussion in this course is about limits of sequences leading to limits of functions. Under this approach there is a constant revisiting of terms and concepts that otherwise are relegated to isolated discussions in calculus. I will share the effect of understanding sequences to the general understanding of concepts such as integration, sided derivatives, and numerical approximations in general. A main component of this approach is the students participation in class and group discussions, writing of solution to problems, and in general verbal justification of any results. (Received September 16, 2008)