Although course level assessment could have different definitions from one discipline to another, but in a convergent subject like mathematics, it means the evaluation of the proficiency level of students in the course learning objectives. One approach to accomplish this task is to test students on mathematical concepts relating to the learning objectives. Alternatively is to assess student evolvement in certain affective variables that affect the learning of mathematics. It has been suggested in the literature to give equal deference to cognitive and affective dimensions in the teaching and learning process of mathematics because some of the problems that may be holding back some students from academic success may lie in the affective domain. Mathematics and Technology Attitude Scale (MTAS) is an instrument designed and validated in Australia to measure certain affective variables that can affect the learning of mathematics. MTAS has five dimensions. The purpose of this study is to investigate the psychometric characteristics of MTAS using American college students in hopes of replicating what has already been done in Australia. The results of this study and its implications to teaching and learning especially in the assessment of college algebra will be presented. (Received September 14, 2008)