1046-Z1-1300   **Paul S. Rossi*** (`prossi@cse.edu`), College of Saint Elizabeth, 2 Convent Road, Morristown, NJ 07960. *Making Effective Use of the Uniform Distribution in an Introductory Probability Theory Course.*

The uniform distribution is, by far, the most basic and straightforward continuous distribution presented in an introductory probability theory course. Although one can easily use the integral (single or double) of a uniform probability density function (pdf) to evaluate probabilities, the properties of the uniform distribution permit the student to calculate these probabilities without the use of calculus. It is these same properties that allow an instructor to use the uniform distribution to reveal to students much about the nature of a non-uniform pdf. In this paper we present some ideas on how to effectively use the uniform distribution in a calculus-based probability theory course. These ideas include: (a) evaluating one-dimensional, and two-dimensional, probabilities, (b) evaluating conditional probabilities, (c) recognizing when a general pdf is increasing, or decreasing, and (d) placing upper, and lower, bounds on a probability (including expected values). Each of these ideas will be illustrated with a specific example. (Received September 15, 2008)