1135-97-1805        **Lochana Siriwardena\*** (`siriwardenal@uindy.edu`) and **Yasanthi Kottegoda** (`ykottegoda@newhaven.edu`). *Assessing an Inquiry Based Curriculum using Bayesian Networks.* Preliminary report.

In this paper we discuss an application of Bayesian networks to assess an inquiry based learning curriculum for Calculus II. We model connections between different concepts and tasks as a Bayesian network to infer certain conditional probabilities. Bayesian network allows us to quantify multiple dependencies of different concepts and their impact on final assessment of the students. This approach is important to measure the effectiveness of the proposed curriculum. For example, If the conditional probability of a student passing the final exam given the student passed all the previous inquiry tasks is very low, that shows a discontinuity between supporting inquiry based tasks and the comprehensive knowledge of concepts. It is also possible to analyze student performance such as the probability of a student failing to master a certain concept given that the student failed to pass the final assessment, using this approach. (Received September 24, 2017)