

1096-VG-2575 **Larry Wayne Lewis*** (l1ewis61@ivytech.edu) and **Rebecca Patterson**
(becky.patterson@louisville.edu). *A Mathematical Modeling Approach to Informing Student
Retention Programming.*

Mathematical predictive modeling using data mining techniques of student data can be an effective tool for addressing issues of enrollment management, institutional fit, and persistence to graduation. First year retention of the Graduation Rate Survey (GRS) cohorts (2006, 2007, 2008, and 2009) was examined. Variables from applications, financial aid, demographic data, and the Cooperative Institutional Research Program (CIRP) Freshman Survey were used in a binary logistic regression equation to identify factors which accurately predicted students' first year retention. Our efforts are to demonstrate an intentional, data-driven approach to support and strengthen pre-existing programs or mechanisms relating to student retention. (Received September 17, 2013)