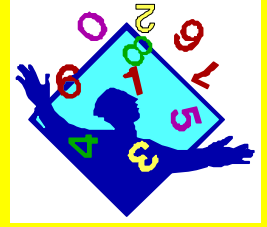


STATISTICS SEMINAR



Master Report **Evaluation and Ranking of Minor-League Hitters Using a Statistical Model**

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DATE: January 20, 2006

TIME: 3:00 pm

PLACE: Bluemont 107

REFRESHMENTS: 2:30 pm – Dickens 108

Traditionally, major-league scouts have evaluated young “position players,” those who are not pitchers, using the “Five Tools”: hitting for average, hitting for power, running, throwing, and fielding. However, “sabermetricians,” those who study the science of baseball, e.g. Bill James, have been trying to evaluate position players using quantifiable measures of performance. A factor analysis has been used to determine underlying characteristics of minor-league hitters. The underlying factors were determined to be slugging ability, lead-off hitting ability, “patience” at the plate, and pure-hitting ability. Additionally, an ordinal response was created from the number of at-bats and on-base plus slugging percentage in the majors during the 2002-05 seasons. The underlying characteristics along with other variables such as a player’s age, position, and level in the minors are used in a cumulative logit logistic regression model to predict a player’s probability of notable success in the majors. The model is built upon data from the 2002 minor-league season and data from the 2002, 2003, 2004, and 2005 major-league seasons.

** Upcoming seminars may also be found on the web at <http://www.ksu.edu/stats/current.seminars/nav.currentseminars.html>.