**Analysis of a Physics Readiness Assessment UT-Austin**[1] SHIN-
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ment of Physics and Center for Nonlinear Dynamics — The dropout or failure rate
of students in calculus-based introductory mechanics at the University of Texas at
Austin has been 20-30 percent over the last decade. We think this rate is too high.
Based on our experience with introductory students, we suspected many students
entered the course without the mathematical proficiency the course demands. To
address this problem we developed a Physics Readiness Assessment Test designed
to identify students whose mathematical skills are weak and are therefore likely to
struggle in introductory mechanics. The assessment is intended to probe students'
math skills without assuming they have significant prior physics knowledge. Over
the past year we have administered our Physics Readiness Assessment to students
in introductory mechanics and correlated their assessment scores with their class
performances. In this presentation, we will present our findings that mathemati-
cal readiness as measured by the Physics Readiness Assessment effectively identifies
students who are at a significant risk to dropout or fail introductory physics.

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Date submitted: 23 Sep 2016                                      Electronic form version 1.4