Every semester, a university decides which undergraduate courses to offer and how much to spend on instructors for these courses. These choices determine how efficiently resources from governments, donors, and families are used to benefit students; however, very little is known about how universities make these decisions. In this paper, I develop methods for understanding how these classroom spending decisions are made. The methods include a test of whether a university's goal is to maximize student welfare and two methods for estimating parameters of a 'student driven' structure of university objectives. I also develop methods for simulating the classroom spending decisions of a hypothetical university whose objective is to maximize student welfare. I apply my methods to administrative data from the University of Central Arkansas. Please follow this link to my website for the most up to date version of my job market paper and other materials: http://sites.duke.edu/jamesthomas/