

1023-F1-1672 **Barry Brunson*** (barry.brunson@wku.edu), 1906 College Heights Blvd #11078, Bowling Green, KY 42101-1078. *Toward a Lean and Lively Algebra*. Preliminary report.

On the one hand, we want students to take more mathematics, not less. More precisely, we want more students to understand more mathematics, both to do a better job of understanding the world around us, and to appreciate (and perhaps, stand in awe of) the inherent beauty of mathematics. The current traditional college algebra course (TCAC) does a poor job of these things, at least in the absence of serious efforts at intervention by the instructor, to supplement what is missing, and to guide the student in not getting bogged down in inert material.

Much of the content of a TCAC appears to be there solely to provide prospective calculus students with a preview of the exercises they will find in the later class. This is intellectually dishonest, even aside from the fact that many of those exercises remain as pointless and contrived as they long have been. Many topics require concentration on hand manipulative skills that today are as useless as manual extraction of square roots.

We propose a trimmed-down course that concentrates on "big ideas" that are both important mathematically, and also relevant to the real world. This approach assumes both constant availability of (and an enlightened use of) technology, and incorporation of generous amounts of real-world data. (Received September 26, 2006)