

Spring 2018

MTE 598: Epistemology and technology of calculus teaching and learning

Instructor: P. Thompson

Time: Wed 4:30-7:30pm Location: PSH 230

Line number: 25526

The course will center around the design principles and design decisions behind the calculus textbook now being used in MAT 270 and MAT 271 (Calculus 1 and Calculus 2). We will examine the ways I've weaved quantitative reasoning, variation, covariation, rate of change, and accumulation so that they develop (in my thinking, at least) a coherent system of meanings and ways of thinking for calculus.

We'll overlay these discussions with ideas from Merton and Artigue (instrumentation), Piaget (schemes, reflecting on one's activities), and issues of creating technological means for engaging students intellectually.

We'll also discuss foundational mathematical issues whose history informed the textbook's overall conceptual design.

It will be a full semester! I hope you are interested.