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Survey of Calculus with Excel. Preliminary report.

At Saint Louis University we offer Survey of Calculus with Excel. This course has been revised in recent years. The research basis for the revision of this course was a survey of the faculty in our Business school, giving results similar to those found by the CRAFTY report, with verification from similar studies done at other schools. The topics covered are the same, but more weight is now given to multivariable calculus, and Excel is used as the computational tool in the classroom. The use of Excel is incorporated very early in the course so that we can use several applications to explore concepts in mathematics. Linear equations are reviewed for instance using supply and demand problems as the basis; the Cobb-Douglass equation is used to motivate the study of rates of change and multivariable functions; marginal cost, revenue and profit are used to motivate explorations in differential calculus.

Collaborations between mathematics faculty and business faculty include guest lectures by business faculty and careful use of examples students will see in classes in both colleges. Discussions have been held to look at modifications to business courses to reinforce the changes made in the mathematics courses. (Received September 22, 2015)