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At Francis Marion University, we created two new college algebra courses that differ significantly from our traditional college algebra courses both in content and approach. These new courses offer a modeling and visualization approach to college algebra. Technology is required. Each course has 4-5 mini-projects (some interdisciplinary and most small group efforts). Each course begins with a block on data analysis and statistics. The main theme for these two courses are functions. Our first course covers linear functions, systems of equations, inequalities, graphical linear programming, and linear regression. The next course reviews linear functions, and then covers nonlinear functions such as polynomial, rational, exponential, and logarithmic. The course also introduces complex numbers and basic conic sections. All these topics are explored using a modified method of four: symbolic, numerical, graphical, and through applications and mathematical modeling. (Received September 14, 2000)