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The NCSU Department of Mathematics is unusually broad with strong programs in pure mathematics, applied mathematics, and industrial mathematics. The department has a strong commitment to diversity. Half of the entering and graduating students are female. The department averages one African American PhD a year. The Hispanic population is small but growing as the state Hispanic population grows. Progress to date has depended on several interrelated factors: recruiting where the students are, making early success possible, appealing to a wide variety of students, keeping them interested in graduate school, active mentoring, careful advisement, and successful placement of graduate students in a variety of careers including academia, industry, and government. Talented entering students, especially those from smaller schools, often have less mathematical background. A student's idea of what they want to do is often based on only one undergraduate course and may change as they advance. For students to succeed and stay in mathematics it is important that a program have considerable flexibility. We will describe what we think has helped us to be successful with a particular emphasis on the first two years. (Received September 09, 2007)