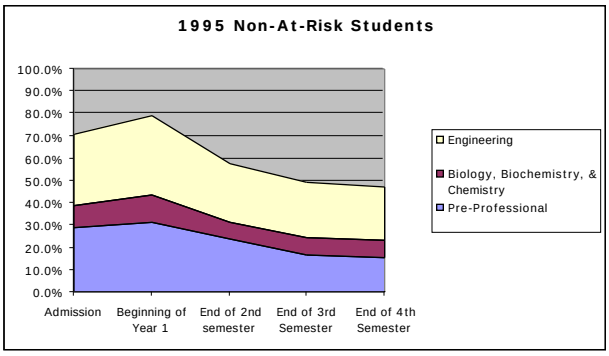
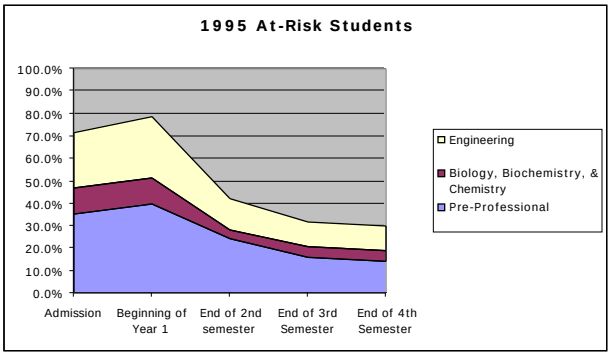
Choice of Majors for Students who Enroll in General Chemistry

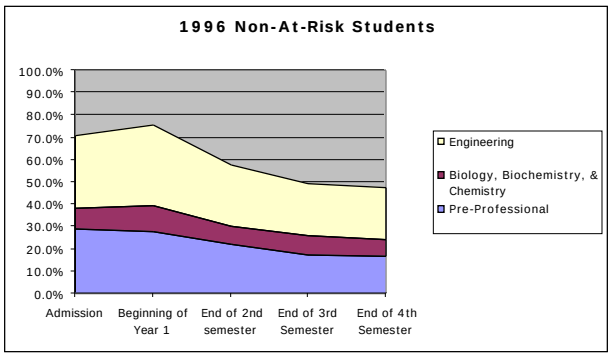
Dennis C. Jacobs
Dept. of Chemistry and Biochemistry
University of Notre Dame

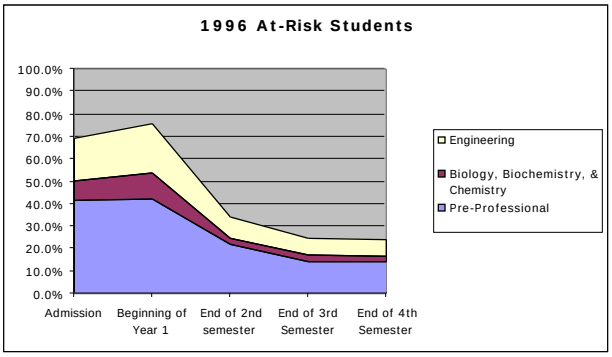
When students first enroll at Notre Dame, they are not allowed to declare a major. Instead they are placed in the First Year Studies program. To assist their advisors in selecting their course schedule, first-year students are asked to state an intended major. Of those students who enroll in General Chemistry, the evolution in the distribution of their majors (science and engineering only) is shown on the following page. The plots illustrate how the choice of majors evolves through the students' first four semesters at Notre Dame. In each frame, the fraction of students in a given cohort (defined as students who enroll in General Chemistry, sorted by risk status and year of matriculation) are plotted by their choice of major (pre-professional studies, biological or chemical sciences, and engineering) at particular times in their first two years.

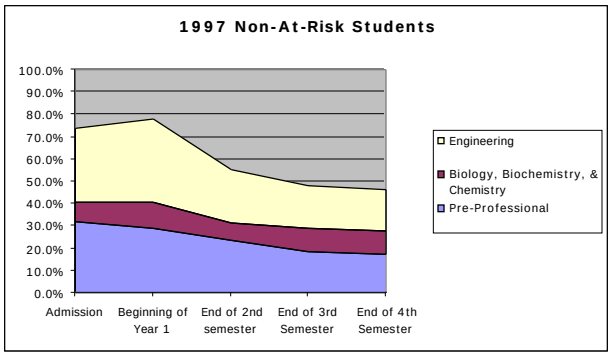
In general, students who scored poorly on the Math SAT exam tend to leave Science and Engineering at a greater rate than did those students who scored above 630 on the same exam. In Fall of 1997, CHEM 113/114 was introduced to offer an alternative General Chemistry sequence for 'at-risk' students (MSAT $\leq$ 630). The number of at-risk students who succeed through the junior year in a science degree program is up by approximately 50% (See red box). For the non-at-risk population, the number of science majors has climbed modestly over the past three years.

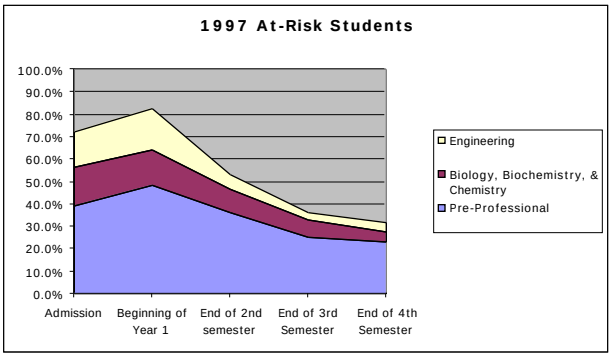


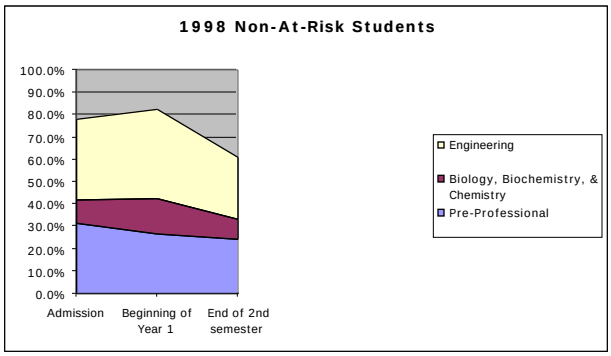


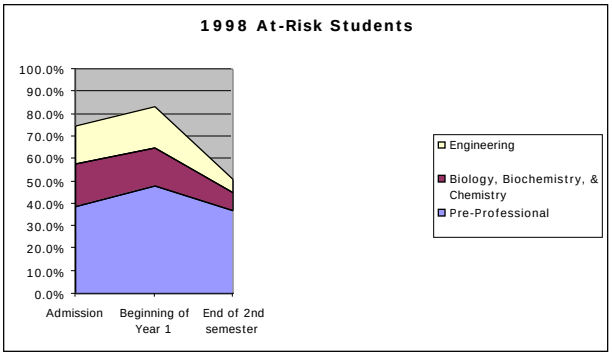












Years refer to the point of matriculation.
Students with a Math SAT score at or below 630 are designated "at-risk".
Students with Math SAT scores above 630 are considered "non-at-risk".