Purdue University students are required to declare a major upon admittance to the university. Rather than taking one or two years of general education core courses before beginning discipline-specific courses, students begin taking courses specific to their major as freshmen. Many first-year biology majors do poorly in their initial science courses; historically, more than one third of the students in the introductory biology lecture course earned an unsatisfactory grade (below a C) or withdrew from the course. Students who did not succeed in the first biology lecture are not likely to complete a biology degree. Of the students who successfully completed baccalaureate degrees in biology from August 1997 to May 1999, only 5% of the 237 graduates initially received less than a C grade in Introductory Biology. A full 71% of biology majors leave the major before degree completion, and 34% leave the University prior to graduation (most of these leave voluntarily, not as a result of academic dismissal). Other science programs at Purdue are faced with similar levels of retention.

The department of Biological Sciences at Purdue University saw it as essential to increase biology student success as measured by grades and by retention rates to both the department and to the university. In 1998, we implemented a discipline-based first-year seminar to help students through the transition to college and to assist them in succeeding academically in the biological sciences. The seminar combined both academic and orientation components since both social and academic experiences impact student persistence in the university (Tinto 1987; Pascarelli & Terenzini 1991; Seymour & Hewitt 1997). The effectiveness of the seminar as an intervention was determined by assessing student success as measured by grades, student satisfaction with their college experience, and retention to the department and to the

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