Product Differentiation in Undergraduate Programs: A Case Study at the University of Georgia

Many agricultural economics and related departments are considering revising their undergraduate programs in response to changing student and clientele needs. The Department of Agricultural and Applied Economics at the University of Georgia recently added two new majors to meet changing needs, and with apparent success.

The department now offers a bachelor of science degree in agriculture (BSA) with majors in agricultural economics (AEC), agribusiness (AGB), and environmental economics and management (EEM). Figure 1 shows undergraduate enrollments by major for the period 1988 to 1996. Before 1991, all students in the department majored in agricultural economics, the major offered for over forty years.

The addition of the agribusiness and environmental programs to the department's offerings resulted from two major undergraduate program initiatives. In 1991, the department added the agribusiness major in response to the findings of an employer's survey which indicated that the term agribusiness was more appealing to employers (Broder and Houston). The AGB major was designed as the bachelor of science counterpart to the bachelor of business administration (BBA) offered by the College of Business. Given the growth in business school enrollments and the competition for business-related jobs, we wanted to avoid creating a "second class" business degree. Our strategy was to match the quantitative rigor of the BBA degree but to differentiate the AGB major based on the strengths of the College of Agriculture and Environmental Sciences. Specifically, we differentiated the AGB major from the BBA by

- giving students a stronger agricultural science background,
- positioning students for employment in food-and-fiber-related industries,
- offering business courses in smaller classes, and
- giving students access to faculty advisors and agribusiness internships.

Although the new AGB degree added majors (figure 1), the new program also created some problems. First, while AGB majors can take up to 25 percent of their course work from the business school, formal cooperation between the College of Business and the College of Agriculture and Environmental Sciences has been less than ideal. Second, the initial growth in AGB enrollments to about forty students was partially at the expense of the AEC program which has lost enrollments since 1991. The AEC major continues to offer the most program flexibility, a factor which should help stabilize the number of AEC majors.

In 1993, the department began offering a BSA degree with a major in environmental economics and management (EEM). The EEM major was initiated in response to student interest and the university's initiative to increase literacy regarding environmental issues. As one of the first environmental management majors on campus, the EEM degree has become the fastest growing program in the department, with enrollments of eighty-four students in spring of 1996. In addition, the EEM program continues to attract some of the brightest students at the university. In retrospect, we attribute the EEM program's success to two major factors. First, timing was important. The EEM major was the first environmental degree offering on campus with a social science orientation. Second, the EEM major offers an attractive mix of natural/physical science and economics/business course offerings. This mix has attracted transfers from arts and sciences (primarily biological sciences) who...
want more exposure to economics/business and transfers from the business school who want more exposure to natural/physical science courses.

Since expanding and differentiating the undergraduate programs, the department has faced two major challenges: establishing and maintaining real differences in program offerings across its majors and matching faculty expertise to student interests. While course requirements differ across majors, the level of differentiation across majors is influenced by the academic advising process. Likewise, while students are generally assigned to advisors based on faculty expertise in AEC, AGB, or EEM, participation by faculty in all degree programs is encouraged. A brief description of our three majors follows.

- **Agricultural economics** majors apply economic principles to issues concerning food and fiber production, natural resource management, community and regional economic development, environmental policy, and international trade. A major in agricultural economics prepares students for graduate school and careers in applied economics, resource management, public program analysis, economic forecasting, and economic research. Representative jobs taken by recent AEC graduates include sales, marketing, management, agricultural credit, real estate, and stock brokerage.

- **Agribusiness** majors learn decision-making skills for agribusiness management, finance, marketing, sales, processing, manufacturing, transportation, and international trade. The primary job market for agribusiness majors are agribusiness firms, banks, and other financial institutions within the state of Georgia. Recent AGB graduates, for example, have taken jobs as sales representatives, greenhouse managers, and cotton merchants. Entry-level jobs taken by AGB graduates were similar to those taken by AEC graduates.

- **Environmental economics and management** majors apply economic principles to analyze and solve natural and environmental resource problems and issues. The EEM major is designed for people who desire to be involved in the wise, efficient, and productive management of natural and environmental resources in both private and public settings. Georgia's EEM major places greater emphasis on economics than do "environmental management" programs at other U.S. universities. The EEM major is a true economics degree program, rather than the more general interdisciplinary "environmental management" programs.

We estimate that 30–50 percent of our EEM graduates currently work for private companies, primarily in environmental compliance, remediation, and project management. This also appears to be a promising area for future job opportunities. A relatively large proportion of EEM graduates have also moved on to graduate programs in resource and environmental economics or environmental law. Relatively few EEM graduates currently work for government agencies or nongovernmental organizations (NGOs).

All majors foster program rigor and career flexibility. When differentiating our majors we wanted to avoid marginalizing program offerings by having different levels of rigor across programs. We wanted students to choose majors for their content and not for their perceived easy requirements. Compared to undergraduate programs at other universities, we believe that our undergraduate programs offer a balance of academic rigor and product differentiation (Larson). Our majors share a common core curriculum with a minimum of four lab-science courses and four mathematics courses (through integral calculus). Students also take courses in microeconomics and statistics. These courses give students the background to take more rigorous upper-level courses in economics and agricultural sciences. Students completing these programs are well prepared for graduate and professional schools. The combination of economics and science courses gives graduates the flexibility to work in a variety of agricultural and environmental fields in both the private and public sectors of the economy. These program offerings allow graduates to differentiate themselves in the marketplace for applied economists.

For more information


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