

The Popcorn Course: An Academic/Industry Partnership Promoting “Real Science” Research Opportunities for Undergraduates

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Many academic institutions have alumni in career positions that afford opportunities to forge unique academic/industry partnerships for the benefit of both institutions. At Michigan State University (MSU), we worked with an MSU alumnus in the Research, Quality & Innovation department at ConAgra Foods to produce a research course for undergraduates at MSU called, “The Science of the Food You Love.” The goal of the resulting 3-credit course was to introduce students to how food companies do research to improve their products, and to have students carry out a research project of their own. In our first iterations of this course (see <https://www.msu.edu/course/lb/494/s11/>), students addressed research questions associated with Orville Redenbacher’s popcorn, one of ConAgra Foods’ flagship brands. Eight students enrolled in the course in spring 2011, and another seven enrolled in spring 2012, which was conducted in Dr. Smith’s research lab on the MSU campus. Student projects ranged from looking at biochemical and physical differences between different popcorn genotypes, to examining parameters associated with the contents of microwave popcorn bags. The capstone experience for the course was a visit to the ConAgra Foods headquarters in Omaha, NE where the students presented the results of their research to ConAgra Foods scientists, and interacted throughout the day with ConAgra Foods staff. Student participants in the course responded very favorably to the experience, with the strongest element being that the research being carried out was authentic and actually mattered to someone. ConAgra Foods scientists played a key role in the success of the course by virtue of making themselves available for consultation and guidance with respect to project feasibility, scope, and relevance. Future offerings of the course will expand beyond popcorn to other products and/or food technologies. We see this research course as a model for other academic/industry partnerships, creating the potential to increase opportunities for research training for undergraduates and to broaden their view of career paths.

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