

Submit 20 copies of NEW Undergraduate proposals to University Curriculum Committee

Submit 8 copies of **REVISED** Undergraduate proposals to University Curriculum Committee

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 Name of Institution Illinois State University Department of Agriculture
Title of Proposed Program Sequence in Food Industry Science (within the Agriculture Major)
Previous Program Title: Not applicable
Six-Digit CIPS code: 02.0101 (Agricultural Sciences-General)
Proposed date for Initiation of Program: August, 2004

# Catalog copy

## Food Industry Science Sequence:

- -- 24 hours in Agriculture and 12 hours in Family and Consumer Sciences.
- -- Required courses (36 hours): AGR 109, 110, 130, 150, 170, 271, 285, 317; FCS 113, 316, 319, 332.
- -- Additional required courses (23-27 hours): AGR 171 or FCS 102; BSC 160 or 260; CHE 110 and 112 or 140 and 141; MAT 120; AGR 205 or ITK 150; BSC 196 or 197.
- -- AGR 295, 394, and 395 do not count toward this sequence.

## Description of proposed program

The proposed sequence is part of the Agriculture major within the Department of Agriculture. The sequence name will be Food Industry Science. The sequence shares the common core requirements of other sequences in the major, namely AGR 109, 110, 130, 150, and 170. The focus of the sequence is to prepare students for science-based careers within the food industry beyond the first purchaser of raw products. The proposed sequence complements the recently approved Food Industry Management sequence of the agribusiness major which emphasizes marketing, management and financial aspects of the food industry.

Beyond the common core required of all sequences in the Agriculture major, the Food Industry Science sequence requires additional courses to provide a stronger foundation and understanding of the food industry. Additional requirements are AGR 271: Foods of Animal Origin; AGR 285: Meat Science; and AGR 317: Food Industry Marketing and Strategic Management; FCS 113: Principles of Food Preparation; FCS 316: Food Science; FCS 319: Quantity Foods; and FCS 332: Food Industry Marketing and Strategic Management II. AGR 171: Introduction to Animal Nutrition or FCS 102: Nutrition in the Life Span is also required.

Please see attached Table 1 for details of the program requirements.

### **Rationale for proposal**

The food industry is a major component of the U.S. economy. Broadly defined, the agriculture industry, which includes the food industry, accounts for about 17% of total U.S. employment and approximately 13% of gross domestic product,

adding approximately \$1.26 trillion to GDP in 2000. (Edmundson, William. Rural America, Volume 17, Issue 1 (Spring 2002), ERS, USDA.)

Graph 1 illustrates the relative contributions of the major sectors of the total U.S. food and fiber system (derived from data from U.S. Departments of Commerce and Labor). The proposed program expands the focus of curricular programs within the Department of Agriculture beyond the traditional areas of agricultural production (6%) and the input industries (34%) to encompass the growing opportunities in the marketing, processing and distribution of food (48%). The proposed program also will broaden the appeal of curricular programs within the department to attract a more diverse student population. For example, the Chicago High School for Agricultural Sciences (CHAS) has a significant minority population that might be interested in the proposed program.

The proposed sequence will create departmental distinctiveness (Item 26, p. 11, Educating Illinois) and increase the enrollments of students from traditionally underrepresented groups (Item 41, p. 16, Educating Illinois). The proposed program is unique within Illinois. Western Illinois University and Southern Illinois University do not offer a similar program. The University of Illinois offers some similar courses within their Agribusiness Markets and Management option but does not offer an identifiable sequence similar to the proposed program. There are several programs within the state that prepare students for careers in food preparation. These program does not emphasize this sector of the food industry. The focus of the proposed program is science-based careers in the food industry such as food scientists, food process engineers, and scientists who are involved with the research and development of new consumer products from raw agricultural products.

### Expected impact of proposal on existing campus programs

We project that enrollment in this sequence will stabilize around 25 students. We would anticipate an increase in the total enrollment in the Department of Agriculture as a result of this sequence. We also anticipate an increase in minority student enrollment as a result of this sequence. The Department of Agriculture has the capacity to accept additional majors.

Supporting courses are required from several other departments. Required courses in Biological Sciences, Chemistry and Mathematics are part of the General Education program. These courses are offered regularly and are specifically designed to accommodate large numbers of students annually. The only department that would experience a significant addition or change of students in their courses is Family and Consumer Sciences (FCS). This program has been jointly developed with FCS and is fully supported by the Department of Family and Consumer Science and the College of Applied Science and Technology.

All courses required in this program are currently offered at least once per year and many of the courses are offered twice per year. The new courses in agriculture (271 and 317) have already been offered. These courses have been integrated into the regular course schedule within the Department of Agriculture by alternating them with other existing courses. See details below.

### Expected curricular changes including new courses

- A. New courses [Note: these three courses have already been approved.]
  - a. AGR 271: Foods of animal origin (required course)
  - b. AGR 317: Food industry marketing and strategic management (required course)
  - c. FCS 332: Food Industry marketing and strategic management II (required course)

#### Milner contacted to determine sufficient resources.

Based on a search of current holdings, the library has adequate resources to support the sequence. A list of current

periodicals that support the sequence is attached as Table 2.

### Anticipated staffing arrangements

The courses required in the sequence will be integrated into regular course schedules and teaching assignments. The two new courses within the Department of Agriculture will be rotated with existing courses. It is anticipated that AGR 271 will rotate with AGR 282 and AGR 317 will rotate with AGR 315. FCS 332 will be integrated into the course offerings within FCS to support this sequence in addition to the proposed Food Industry Management sequence in FCS. The other required courses already have a history of regular offering. No additional staff is required to offer this program.

## Anticipated funding needs and source of funds

None.

## Letters of concurrence from affected departments

Attached letter from Department of Family and Consumer Sciences.

Requirements	Minimum	Maximun	n	
-	Hours	Hours	Prereqs	Schedule for Offering
AGR 109	1	1		F,S
AGR 110	3	3		F,S
AGR 130	3	3		S
AGR 150	4	4		F
AGR 170	4	4		F
AGR 271	3	3	Che 110/112 or 140/141	F
AGR 285	3	3		S
AGR 317	3	3	AGR 215 or Consent	S
FCS 113	3	3	FCS 102 or Consent	F,S
FCS 316	3	3	FCS 213/CHE 110/112 or Consent	F
FCS 319	3	3	FCS 213 or Consent	S
FCS 332	3	3	AGR 317	S
CHE 110/112 or 140/141	5	8	IDS 100	F,S
MAT 120	4	4		F,S
AGR 205 or ITK 150	3	3		F,S
BSC 160 or 260	4	4	Inner Core	F,S
BSC 196 or 197	4	4	IDS 100	F,S
FCS 102 or AGR 171	3	4		F,S or F
Total	59	63		

### Table 1: Program requirements for proposed sequence--Food Industry Science

--24 hours in Agriculture and 12 hours in Family and Consumer Sciences

-- Required courses (36 hours): AGR 109, 110, 130, 150, 170, 271, 285, 317; FCS 113, 316, 319, 332.

--Additional required courses (23-27 hours): AGR 171 or FCS 102; CHE 110 and 112 or 140 and 141; Mat 120; AGR 205 or ITK 150; BSC 196 or 197; BSC 160 or 260.

-- AGR 295, 394, and 395 do not count toward this sequence.

#### Table 2: Milner Library Periodical Holdings Related to Proposed Program

HD9000.1 .J68	Journal of International Food and Agribusiness Marketing		
HD9001 .J68	Journal of Food Distribution Research		
S560 .J6	American Journal of Agricultural Economics		
S583 .J6	Journal of Agricultural and Food Chemistry		
TX341 .J6	Journal of the Science of Food and Agriculture		
TX556 .M4 M45	Meat Science		
HD1401 .A333	Agribusiness: An International Journal		
HD1401 .A901	Australian Journal of Agricultural and Resource Economics		
HD1401 .J6802	Journal of Agricultural Economics (England)		
HD1401 .N67501	Review of Agricultural Economics		
HD1401 .S6701	Journal of Agricultural and Applied Economics		
HD1401 .W4701	Journal of Agricultural and Resource Economics		

FoodIndustScienceSeq10-01-03

http://academicsenate.illinoisstate.edu/consent-agenda/ProgramProposal...

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