

# BACHELOR OF SCIENCE DEGREE

## FOOD SCIENCE

### COORDINATE MAJOR

FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

#### (1) UNIVERSITY REQUIREMENTS

##### Writing Requirement

Tier I: LB 133 4  
 Tier II: Satisfied by completing the Lyman Briggs College History, Philosophy and Sociology of Science and Senior requirements listed below.

##### Integrative Studies in Arts & Humanities (IAH)

IAH 201-210\* 4  
 IAH 211-241\* † 4

##### Integrative Studies in Social, Behavioral & Economic Sciences (ISS)

ISS 200-level course\* 4  
 ISS 300-level course\*‡ 4

\*National, International, & Multicultural Diversity  
 Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement, but not both.

†Beginning Summer 2013, LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC advisor for specific details for your program.

‡Beginning Summer 2013, LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC advisor for specific details for your program.

##### Mathematics, Biological and Physical Sciences

Satisfied by the Lyman Briggs College requirements in Mathematics, Biological and Physical Sciences (see below).

Minimum number of credits required: 120

Minimum cumulative and major grade point average: 2.0

#### (2) LYMAN BRIGGS COLLEGE REQUIREMENTS

##### Biological Sciences (9 cr.)

Complete ONE of the following groups of courses  
 (1) LB 144 & 145 9  
 (2) BS 161, 162, 171, & 172 10

##### Chemistry (8-9 cr.)

Complete ONE of the following groups of courses  
 (1) LB 171, 171L, 172 & 172L 9  
 (2) CEM 141, 142, 161, & 162 9  
 (3) CEM 151, 152, 161, & 162 9

##### Physics (8 cr.)

Complete ONE of the following groups of courses  
 (1) LB 273, 274\* 8  
 (2) PHY 231, 232, 251, & 252 8

##### Mathematics (6-7 cr.)†

Complete ONE of the following groups of courses  
 (1) LB 118 & STT 231 7  
 (2) MTH 132 & STT 321 6

##### History, Philosophy & Sociology of Science (11-12 cr.)

LB 133 4  
 LB 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

##### Senior Seminar (4 cr.)

LB 492\* 4

\*For the Basic Food Science concentration, students may count LB 274 and LB 492 towards the nine credits of major electives

†Please see an advisor regarding Mathematics requirements for this major

### (3) MAJOR REQUIREMENTS

Complete ALL of the following courses (33 cr.)

BE	429	Fundamentals of Food Engineering	3
FSC	211	Principles of Food Science	3
FSC	325	Food Processing: Unit Operations	3
FSC	401	Food Chemistry	3
FSC	402	Food Chemistry Lab	1
FSC	410	Sensory Analysis & Consumer Research	3
FSC	440	Food Microbiology	3
FSC	441	Food Microbiology Lab	2
FSC	455	Food & Nutrition Laboratory	3
FSC	470	Integrated Approaches to Food Product Development	3
HNF	260	Principles of Human Nutrition	3
MMG	301	Introductory Microbiology	3

Complete TWO of the following courses (6 cr.)

FSC	430	Food Processing: Fruits & Vegetables	3
FSC	431	Food Processing: Cereals	3
FSC	432	Food Processing: Dairy Foods	3
FSC	433	Food Processing: Muscle Foods	3

Complete ONE of the following courses (3 cr.)

ACR	205	Agriculture & Natural Resources Communication Theory & Practice	3
COM	100	Human Communication	3
COM	224	Introduction to Interpersonal Communication	3

Complete ONE of the following four concentrations

#### (1) Basic Food Science

Complete ALL of the following courses (12 cr.)

BMB	401	Comprehensive Biochemistry	4
CEM	251	Organic Chemistry I	3
CEM	252	Organic Chemistry II	3
CEM	255	Organic Chemistry Laboratory	2

Complete nine credits from the following courses (9 cr.)

ANS	407	Food & Animal Toxicology	3
ANS	417	Topics in Toxicology	1
CEM	262	Quantitative Analysis	3
CEM	333	Instrumental Methods and Applications	3
CEM	383	Introductory Physical Chemistry I	3
FSC	342	Food Safety & HACCP Program	3
FSC	421	Food Laws & Regulations	3
LB	274	Physics II	4
LB	492	Senior Seminar	4
MMG	409	Eukaryotic Cell Biology	3
MMG	425	Microbial Ecology	3
MMG	431	Microbial Genetics	3
MMG	445	Microbial Biotechnology (W)	3
MMG	451	Immunology	3
PHM	350	Introductory Human Pharmacology	3
PHM	450	Introduction to Chemical Toxicology	3

#### (2) Food Business & Industry

Complete ALL of the following courses (14 cr.)

ACC	230	Survey of Accounting Concepts	3
BMB	200	Introduction to Biochemistry	4
CEM	143	Survey of Organic Chemistry	4
MKT	327	Introduction to Marketing	3

Complete two of the following courses (6 cr.)

ABM	100	Decision-making in the Agri-Food System	3
ABM	222	Agribusiness & Food Industry Sales (W)	3
ABM	435	Financial Management in the Agri-Food System	3
FI	311	Financial Management	3
FIM	335	Food Marketing Management	3
MKT	302	Consumer & Organizational Buyer Behavior	3

Note: Either FI 311 or ABM 435, but not both of those courses, may be used towards this concentration.

#### (3) Food Packaging

Complete ALL of the following courses (22 cr.)

BMB	200	Introduction to Biochemistry	4
CEM	143	Survey of Organic Chemistry	4
PKG	101	Principles of Packaging	3
PKG	221	Packaging with Glass & Metal	3
PKG	322	Packaging with Paper & Paperboard	4
PKG	323	Packaging with Plastics	4

#### (4) Food Technology (19 cr.)

Complete ALL of the following courses (10 cr.)

BMB	200	Basic Biochemistry	4
CEM	143	Survey of Organic Chemistry	4
FSC	420	Quality Assurance	2

Complete nine credits from the following courses (9 cr.)

FSC	342	Food Safety & HACCP Program	3
FSC	421	Food Laws & Regulations	3
FSC	430	Food Processing: Fruits & Vegetables	3
FSC	431	Food Processing: Cereals	3
FSC	432	Food Processing: Dairy Foods	3
FSC	433	Food Processing: Muscle Foods	3
HB	100	Introduction to Hospitality Business	2
HB	265	Food Management: Safety & Nutrition	3
HB	267	Management of Food & Beverage Systems	3
HNF	300	Experimental Approaches to Food	4

Courses selected to meet this requirement may not be used to fulfill the 6 credit/2 course Food Processing requirement above.

**IMPORTANT: These guidelines are presented for planning purposes only. Students MUST consult a department advisor confirmation of major requirements.**