FOOD SCIENCE, BS

REQUIREMENTS

UNIVERSITY REQUIREMENTS

All undergraduate students must complete both the following Core General Education (Core GenEd) and University Degree and Quality of Work requirements. The requirements below apply to students whose first term at UW-Madison or whose earliest post-high school college attendance at any institution is Summer 2026 or later.

Students whose first term at UW-Madison or whose earliest post-high school college attendance at any institution occurred before Summer 2026 should refer to the archived Guide (https://guide.wisc.edu/archive/) for the requirements that apply to them.

CORE GENERAL EDUCATION (CORE GENED) REQUIREMENTS

Civics & Perspectives	3 credits of Civics & Perspectives coursework.
Communicatio & Literacy	6 credits of Communication & Literacy coursework. This requirement may be partially satisfied by a qualifying placement test score. More information: https://go.wisc.edu/qualifyingenglishplacement (https://go.wisc.edu/qualifyingenglishplacement/)
Humanities & Arts	6 credits of Humanities & Arts coursework.
Mathematics & Quantitative Reasoning	6 credits of Mathematics & Quantitative Reasoning coursework. This requirement may be partially satisfied by a qualifying placement test score. More information: https://go.wisc.edu/qualifyingmathplacement (https://go.wisc.edu/qualifyingmathplacement/)
Natural Science & Wellness	Complete both: • 6 credits of Natural Science & Wellness or Natural Science & Wellness + Laboratory coursework. • one course must be in Natural Science & Wellness + Laboratory coursework.
Social & Behavioral Science	3 credits of Social & Behavioral Science coursework.
Total Credits	30 credits.

For more information see the policy (https://policy.wisc.edu/library/UW-1095/).

UNIVERSITY DEGREE AND QUALITY OF WORK REQUIREMENTS

All undergraduate degree recipients must complete the following minimum requirements. Requirements for some programs will exceed these requirements; see program requirements for additional information.

Total Degree	120 degree credits.
Residency	Complete 30 credits in residence. A course is considered "in residence" if it is taken when in undergraduate degree-seeking status and: • is offered by UW-Madison and completed on the UW-Madison campus or at an approved off-site location, or • is offered by UW-Madison in an online or distance format, or is completed during participation in a UW-Madison study abroad/study away program.
Quality of Work	Achieve at least the minimum grade point average specified by the school, college, and/or academic program.
Math	Demonstrate minimal mathematics competence by: • placing above MATH 96, or, • successfully completing MATH 96, or • successfully completing a more advanced mathematics course such as MATH 112, MATH 113, MATH 114, MATH 141, MATH 211, or MATH 221.
English Language	If required to take the UW-Madison English as a Second Language Assessment Test (MSN-ESLAT), demonstrate minimal English language competence by: • earning credit for ESL 118, or • achieving a qualifying MSN-ESLAT placement test score.
Language	Complete one: • 2 high school units of a single language other than English, or • one course with the second semester Language designation.
Major Declaration	Declare and complete the requirements for at least one major.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

CALS GRADUATION REQUIREMENTS

Cumulative Credits	• Students must earn 120 degree credits. • Students declared in Biological Systems Engineering BS must earn 125 degree credits.
Quality of Work	Students must maintain a minimum cumulative grade point average of 2.000 to remain in good standing and be eligible for graduation.
Residency	Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree.

In addition to the university's general requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements, CALS college requirements, or major requirements. A course may count toward university requirements and a college and/or a major requirement; similarly, a course counted toward college requirements may also be used to satisfy a university and/or a major requirement.

CALS COLLEGE REQUIREMENTS

CALS First-Year Seminar	1 credit. See the full list of eligible courses below or use this link: https://go.wisc.edu/calsfirstyearseminars (https://go.wisc.edu/calsfirstyearseminars/)
Ethnic Studies	3 credits with the Ethnic Studies designation.
Communication A	Complete either: • 1 course with the Communication A designation, or • satisfaction of Communication A based on UW Placement Test.
Quantitative Reasoning A	Complete either: • 1 course with the Quantitative Reasoning A designation, or • satisfaction of Quantitative Reasoning A based on UW Placement Test.
Introductory Chemistry	Complete one: • CHEM 103 • CHEM 108 • CHEM 109
CALS International Comparisons	3 credits. See the full list of eligible courses below or use this link: https://go.wisc.edu/calsinternationalcomparisons (https://go.wisc.edu/calsinternationalcomparisons/)
Communication B	1 course with the Communication B designation.
Quantitative Reasoning B	1 course with the Quantitative Reasoning B designation.
Biological Science	5 credits with the Biological Science designation.
Additional Science	3 credits with the Biological, Physical, or Natural Science designations.
Science Breadth	3 credits with the Biological, Physical, Natural, or Social Science designations.
Humanities	6 credits with the Humanities or Literature designation.
Social Sciences	3 credits with the Social Sciences designation.
Capstone Learning Experience	Each major articulates the required capstone learning experience.

CALS First-Year Seminars

Code	Title	Credits
AN SCI 135	Grand Challenges and Career Opportunities in Animal and Dairy Sciences	1
BIOCHEM 100	Biochemistry First-Year Seminar	1
COUN PSY 125	The Wisconsin Experience Seminar	1
FW ECOL 101	Orientation to Wildlife Ecology	1
FW ECOL 105	Environment, Pollutants, and You	3
GENETICS 155	Freshman Seminar in Genetics	1
INTEGSCI 100	Exploring Biology	2
INTEGSCI 140	Exploring Service in STEM	1
INTER-AG 155	Issues in Agriculture, Environment, and Life Sciences	1
LSC 155	First-Year Seminar in Science Communication	1
MICROBIO 150	Microbiomes and Microbiology - First-Year Seminar	1
PLANTSCI/ AGROECOL 100	First-Year Seminar in Agroecology and Plant Science	1
PL PATH 155	Food Frontlines: Security, Sustainability, and Survival	1
SOIL SCI 155	First-year Seminar in Soil and Environmental Sciences	1
Learning Community/Student Group Courses		
The following learning community/student group courses are approved as CALS First-Year Seminars.		
COUN PSY 117	PEOPLE First Year Seminar	1
INTEGSCI 110	BioHouse Seminar: Biology for the 21st Century	1
INTER-AG 117	GreenHouse Roots Seminar	1
INTER-AG 140	CALS QuickStart: Foundations	1
INTER-AG 175	WISE Seminar	1

CALS International Comparisons

Code	Title	Credits
The 3 credit requirement may be fulfilled as either a stand-alone 3 credit course or as a set of courses as listed below.		
A A E/ENVIR ST 244	The Environment and the Global Economy	4
A A E 319	The International Agricultural Economy	3
A A E/NUTR SCI 350	World Hunger and Malnutrition	3
A A E 352	Global Health: Economics, Natural Systems, and Policy (approved for enrollments Summer 2021 and later)	4
A A E/INTL ST 373	Globalization, Poverty and Development	3
A A E/INTL ST 374	The Growth and Development of Nations in the Global Economy	3
A A E/ECON 473	Economic Growth and Development in Southeast Asia	3
A A E/ECON 474	Economic Problems of Developing Areas	3
A A E/ECON/INTL BUS 462	Latin American Economic Development	3
A A E/ECON 477	Agricultural and Economic Development in Africa	3
AGROECOL 377	Global Food Production and Health	3
AN SCI/DY SCI 370	Livestock Production and Health in Agricultural Development	3
ASIAN/HISTORY/ POLI SCI 255	Introduction to East Asian Civilizations (approved for enrollments Summer 2021 and later)	3-4
CE SOC/SOC 341	Labor in Global Food Systems (approved for enrollments Summer 2020 and later)	3
CE SOC/ENVIR ST/ SOC 540	Sociology of International Development, Environment, and Sustainability	3

CSCS 500	Global Health and Communities: From Research to Praxis	3
DY SCI 471	Food Production Systems and Sustainability	3
ENTOM/ENVIR ST 201	Insects and Human Culture-a Survey Course in Entomology	3
ENTOM/ENVIR ST 205	Our Planet, Our Health (approved for enrollments Fall 2026 and later)	3
ENTOM/ZOOLOGY 371	Medical Entomology: Biology of Vector and Vector-borne Diseases	3
FW ECOL/ENVIR ST 100	Forests of the World (approved for enrollments Summer 2020 and later)	3
FW ECOL/ENVIR ST/ ZOOLOGY 360	Extinction of Species	3
LSC 251	Science, Media and Society (approved for enrollments Summer 2020 and later)	3
PL PATH/BOTANY 123	Plants, Parasites, and People	3
PL PATH 311	Global Food Security	3
PLANTSCI 370	World Vegetable Crops	3
The following study abroad courses fulfill the CALS International Comparisons requirement. Only the specific course numbers and titles listed, including Topics titles (in parentheses), are approved to meet the CALS International Comparisons requirement.		
BIOCHEM 307	Study Abroad: Introduction to Biological Sciences Research in Japan (approved for enrollments Fall 2026 and later)	3
NUTR SCI/INTER-AG 421	Global Health Field Experience (UW Mobile Clinics and Health Care in Uganda)	3
INTER-AG 321 & INTER-AG/NUTR SCI 421	Study Abroad Pre-Departure Seminar and Global Health Field Experience (UW Global Health Community Health and Asset-Based Community Development in Sri Lanka)	3
INTER-AG 321 & INTER-AG/NUTR SCI 421	Study Abroad Pre-Departure Seminar and Global Health Field Experience (UW Agriculture, Health and Nutrition in Uganda)	3
INTER-AG/NUTR SCI 421	Global Health Field Experience (UW Health, Education and Tanzanian Culture)	3

MAJOR REQUIREMENTS

NUTR SCI/A A E 350 World Hunger and Malnutrition is recommended to fulfill the CALS International Comparisons requirement.

Code	Title	Credits
Mathematics and Statistics		
This major requires calculus. Prerequisites may need to taken before enrollment in calculus.		
Complete the following:		5
MATH 221	Calculus and Analytic Geometry 1	
Complete one of the following:		3
STAT 301	Introduction to Statistical Methods	
STAT 371	Introductory Applied Statistics for the Life Sciences	
Chemistry		
General Chemistry		
Complete one of the following:		5-9
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 109	Advanced General Chemistry	
Organic Chemistry		
CHEM 343	Organic Chemistry I	3
Physics		
Complete one of the following:		4-5
PHYSICS 103	General Physics	
PHYSICS 201	General Physics	
PHYSICS 207	General Physics	
Biology		
Introductory Biology		
BIOLOGY/BOTANY/ ZOOLOGY 151	Introductory Biology	5
Fundamental Biological Sciences		
MICROBIO 101	General Microbiology	3
or MICROBIO 303	Biology of Microorganisms	
MICROBIO 102	General Microbiology Laboratory	2
or MICROBIO 304	Biology of Microorganisms Laboratory	
BIOCHEM 501	Introduction to Biochemistry	3
Nutritional Science		
NUTR SCI/ BIOCHEM 510	Nutritional Biochemistry and Metabolism	3
or NUTR SCI 332	Human Nutritional Needs	
Core		
FOOD SCI 301	Introduction to the Science and Technology of Food	3
AN SCI/FOOD SCI 321	Food Laws and Regulations	1
FOOD SCI/ MICROBIO 324	Food Microbiology Laboratory	2
FOOD SCI/ MICROBIO 325	Food Microbiology	3
FOOD SCI 410	Food Chemistry	3
FOOD SCI 412	Food Analysis	4
FOOD SCI 432	Principles of Food Preservation	3
FOOD SCI 440	Principles of Food Engineering	3
FOOD SCI 514	Integrated Food Functionality	4
FOOD SCI 532	Integrated Food Manufacturing	4
Integrated Food Product Elective		
Complete one of the following (2 credits minimum):		2
FOOD SCI 511	Chemistry and Technology of Dairy Products	
FOOD SCI/ AN SCI 515	Commercial Meat Processing	

FOOD SCI 535	Confectionery Science and Technology	
Capstone		
FOOD SCI 602	Senior Project	2
FOOD SCI 603	Senior Seminar	1
Total Credits		**71-76**