NUTRITIONAL SCIENCES, B.S.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) section of the *Guide*.

General Education

- Breadth—Humanities/Literature/Arts: 6 credits
- Breadth—Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
- Breadth—Social Studies: 3 credits
- Communication Part A & Part B *
- Ethnic Studies *
- Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.

COLLEGE REQUIREMENTS FOR ALL CALS B.S. DEGREE PROGRAMS

Code	Title	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.		
First Year Seminar (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementstext)		1
International Studies (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementstext)		3
Physical Science Fundamentals		4-5
CHEM 103	General Chemistry I	
or CHEM 108	Chemistry in Our World	
or CHEM 109	Advanced General Chemistry	
Biological Science		5
Additional Science (Biological, Physical, or Natural)		3
Science Breadth (Biological, Physical, Natural, or Social)		3
CALS Capstone Learning Experience: included in the requirements for each CALS major (see "Major Requirements") (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementstext)		

MAJOR REQUIREMENTS

Code	Title	Credits
Mathematics and Statistics		
Select one of the following (or may be satisfied by placement exam):		5-6
MATH 112 & MATH 113	Algebra and Trigonometry	
MATH 114	Algebra and Trigonometry	
MATH 171	Calculus with Algebra and Trigonometry I [1]	
Select one of the following:		3-5
STAT 301	Introduction to Statistical Methods	
STAT 371	Introductory Applied Statistics for the Life Sciences	
Chemistry		
Select 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
CHEM 344	Introductory Organic Chemistry Laboratory	2
CHEM 345	Organic Chemistry II	3
Introductory Biology		
Select one of the following options:		10
Option 1:		
BOTANY/ BIOLOGY 130	General Botany	
ZOOLOGY/ BIOLOGY 101	Animal Biology	
ZOOLOGY/ BIOLOGY 102	Animal Biology Laboratory	
Option 2:		
BIOLOGY/ BOTANY/ ZOOLOGY 151	Introductory Biology	

BIOLOGY/ BOTANY/ ZOOLOGY 152	Introductory Biology	
Option 3:		
BIOCORE 381	Evolution, Ecology, and Genetics	
BIOCORE 382	Evolution, Ecology, and Genetics Laboratory	
BIOCORE 383	Cellular Biology	
BIOCORE 384	Cellular Biology Laboratory	
Nutritional Sciences Biology		
Select one of the following options:		8-13
Option 1:		
ANAT&PHY 335	Physiology	
GENETICS 466	Principles of Genetics	
And select one of the following: [2]		
MICROBIO 101 & MICROBIO 102	General Microbiology and General Microbiology Laboratory	
MICROBIO 303 & MICROBIO 304	Biology of Microorganisms and Biology of Microorganisms Laboratory	
Option 2: [3]		
BIOCORE 485	Principles of Physiology	
BIOCORE 486	Principles of Physiology Laboratory	
BIOCORE 587	Biological Interactions	
Physics		
Select one of the following:		8-10
PHYSICS 103 & PHYSICS 104	General Physics and General Physics	
PHYSICS 201 & PHYSICS 202	General Physics and General Physics	
PHYSICS 207 & PHYSICS 208	General Physics and General Physics	
Core		
NUTR SCI/AN SCI/ DY SCI 311	Comparative Animal Nutrition	3
or NUTR SCI 332	Human Nutritional Needs	
NUTR SCI 431	Nutrition in the Life Span	3
BIOCHEM/NUTR SCI 510	Nutritional Biochemistry and Metabolism	3
Select one of the following:		3-7
BIOCHEM 501	Introduction to Biochemistry	
BIOCHEM 507 & BIOCHEM 508	General Biochemistry I and General Biochemistry II	
BMOLCHEM 503	Human Biochemistry	
Electives within the Major		
Select 6 credits from the following:		6
A A E/ AGRONOMY/ NUTR SCI 350	World Hunger and Malnutrition	
ANAT&PHY 337	Human Anatomy	
ANAT&PHY 338	Human Anatomy Laboratory	
ANTHRO 365	Medical Anthropology	
BIOCHEM 550	Principles of Human Disease and Biotechnology	
BIOCHEM/ M M & I 575	Biology of Viruses [4]	
BIOCHEM/ NUTR SCI 645	Molecular Control of Metabolism and Metabolic Disease [5]	
C&E SOC/ SOC 533	Public Health in Rural & Urban Communities	
CHEM 311	Chemistry Across the Periodic Table	
CHEM 327	Fundamentals of Analytical Science	
CHEM 329	Fundamentals of Analytical Science	
DY SCI 378	Lactation Physiology	
FOOD SCI/ AN SCI 321	Food Laws and Regulations	
FOOD SCI/ MICROBIO 325	Food Microbiology	
GENETICS 545	Genetics Laboratory	
HORT/ AGRONOMY 338	Plant Breeding and Biotechnology	
HORT/ AGRONOMY/ BOTANY 339	Plant Biotechnology: Principles and Techniques I	
HORT/ AGRONOMY 360	Genetically Modified Crops: Science, Regulation & Controversy	
MED HIST/ PHILOS 515	Public Health Ethics	
MED HIST/ PHILOS 558	Ethical Issues in Health Care	
M M & I/PATH-BIO 528	Immunology	
NUTR SCI 375	Special Topics	
NUTR SCI 377	Cultural Aspects of Food and Nutrition	
NUTR SCI/INTER-AG 421	Global Health Field Experience	
NUTR SCI/ KINES 525	Nutrition in Physical Activity and Health	
NUTR SCI 500	Undergraduate Capstone Seminar Laboratory	
NUTR SCI 540	Community Nutrition and Health Equity	
NUTR SCI/ BIOCHEM 619	Advanced Nutrition: Intermediary Metabolism of Macronutrients [4]	
NUTR SCI/ POP HLTH 621	Introduction to Nutritional Epidemiology [4]	
NUTR SCI 623	Advanced Nutrition: Minerals [4]	
NUTR SCI 625	Advanced Nutrition: Obesity and Diabetes [4]	
NUTR SCI/ AN SCI 626	Experimental Diet Design [4]	
NUTR SCI 627	Advanced Nutrition: Vitamins [4]	
NUTR SCI 631	Clinical Nutrition I	
NUTR SCI 681	Senior Honors Thesis [5]	
NUTR SCI 682	Senior Honors Thesis [5]	
NUTR SCI 691	Senior Thesis-Nutrition [5]	
NUTR SCI 692	Senior Thesis [5]	
NUTR SCI 699	Special Problems [6]	

ONCOLOGY 401	Introduction to Experimental Oncology
PATH 404	Pathophysiologic Principles of Human Diseases
POP HLTH 370	Introduction to Public Health: Local to Global Perspectives
ZOOLOGY 470	Introduction to Animal Development
ZOOLOGY 570	Cell Biology

Capstone		
Select one of the following:		1-8
NUTR SCI 500	Undergraduate Capstone Seminar Laboratory	
NUTR SCI 681 & NUTR SCI 682	Senior Honors Thesis and Senior Honors Thesis	
NUTR SCI 691 & NUTR SCI 692	Senior Thesis-Nutrition and Senior Thesis	
NUTR SCI 699	Special Problems [7]	
Total Credits		**66-91**

[1]

If MATH 171 Calculus with Algebra and Trigonometry I is taken, students must take MATH 217 Calculus with Algebra and Trigonometry II.

[2]

Consult advisor about combining MICROBIO 303 with MICROBIO 102.

[3]

If the Biocore sequence is taken to fulfill the first biology requirement, it must be taken to fulfill the second biology requirement.

[4]

These courses are taught primarily to graduate students. Permission to enroll from instructor may be required.

[5]

Note that for NUTR SCI 681/NUTR SCI 682 (Senior Honors Thesis) and NUTR SCI 691/NUTR SCI 692 (Senior Thesis), both courses in the sequence must be completed in order to earn a grade.

[6]

May count up to 6 credits of NUTR SCI 699 Special Problems towards the electives requirement.

[7]

Consult advisor regarding the possibility of completing NUTR SCI 699 Special Problems for capstone.

RECOMMENDED NUTRITIONAL SCIENCE ELECTIVES

Code	Title	Credits
ANTHRO 365	Medical Anthropology	3
BIOCHEM 550	Principles of Human Disease and Biotechnology	2
BIOCHEM/ M M & I 575	Biology of Viruses	2
BIOCHEM/ NUTR SCI 645	Molecular Control of Metabolism and Metabolic Disease	3
C&E SOC/SOC 533	Public Health in Rural & Urban Communities	3
CHEM 311	Chemistry Across the Periodic Table	4
CHEM 327	Fundamentals of Analytical Science	4
CHEM 329	Fundamentals of Analytical Science	4
AN SCI/ FOOD SCI 305	Introduction to Meat Science and Technology	4
FOOD SCI/ AN SCI 321	Food Laws and Regulations	1
FOOD SCI/ MICROBIO 325	Food Microbiology	3
GENETICS 545	Genetics Laboratory	2
HORT/ AGRONOMY 338	Plant Breeding and Biotechnology	3
HORT/ AGRONOMY 360	Genetically Modified Crops: Science, Regulation & Controversy	2
ANAT&PHY 337	Human Anatomy	3
ANAT&PHY 338	Human Anatomy Laboratory	2
MED HIST/ PHILOS 515	Public Health Ethics	3
MED HIST/ PHILOS 558	Ethical Issues in Health Care	3
M M & I/PATH-BIO 528	Immunology	3
NUTR SCI/A A E/ AGRONOMY 350	World Hunger and Malnutrition	3
NUTR SCI 375	Special Topics	1-4
NUTR SCI 377	Cultural Aspects of Food and Nutrition	3
NUTR SCI/INTER-AG 421	Global Health Field Experience	1-4
NUTR SCI 500	Undergraduate Capstone Seminar Laboratory	1
NUTR SCI/ KINES 525	Nutrition in Physical Activity and Health	3
NUTR SCI 540	Community Nutrition and Health Equity	3
ONCOLOGY 401	Introduction to Experimental Oncology	2
PATH 404	Pathophysiologic Principles of Human Diseases	3
POP HLTH 370	Introduction to Public Health: Local to Global Perspectives	3
ZOOLOGY 470	Introduction to Animal Development	3
ZOOLOGY 570	Cell Biology	3

HONORS IN THE MAJOR

Students admitted to the university and to the College of Agricultural and Life Sciences are invited to apply to be considered for admission to the CALS Honors Program.

Admission Criteria for New First-Year Students:

- Complete program application including essay questions

Admission Criteria for Transfer and Continuing UW-Madison Students:

- UW-Madison cumulative GPA of at least 3.25
- Complete program application including essay questions

HOW TO APPLY

The application is available on the CALS Honors Program website (https://cals.wisc.edu/academics/undergraduate-students/outside-the-classroom/honors-program/). Applications are accepted at any time.

New first-year students with accepted applications will automatically be enrolled in Honors in Research. It is possible to switch to Honors in the Major in the student's first semester on campus after receiving approval from the advisor for that major. Transfer and continuing students may apply directly to Honors in Research or Honors in the Major (after approval from the major advisor).

REQUIREMENTS

All CALS Honors programs have the following requirements:

- Earn at least a cumulative 3.25 GPA at UW-Madison (some programs have higher requirements)
- Complete the program-specific requirements listed below
- Submit completed thesis documentation to CALS Academic Affairs

REQUIREMENTS

To earn Honors in the Major, students are required to take at least 20 honors credits. In addition, students must take NUTR SCI 681 Senior Honors Thesis and NUTR SCI 682 Senior Honors Thesis when completing their thesis project; please see the Honors in Major Checklist (http://www.cals.wisc.edu/academics/undergraduate-programs/get-involved/honors-program/honors-in-the-major/) for more information.

UNIVERSITY DEGREE REQUIREMENTS

Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.
Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.
Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.