NUTRITIONAL SCIENCES, BS

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 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 BS 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/#CALSFirstYearSeminarCourses) 1

International studies (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSInternationalStudiesCourses) 3

Physical science fundamentals 4-5

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103</td>
<td>General Chemistry I</td>
<td>1</td>
</tr>
<tr>
<td>or CHEM 108</td>
<td>Chemistry in Our World</td>
<td></td>
</tr>
<tr>
<td>or CHEM 109</td>
<td>Advanced General Chemistry</td>
<td></td>
</tr>
</tbody>
</table>

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/#CALSCapstoneRequirement)

MAJOR REQUIREMENTS

Code
Title
Credits

Mathematics and Statistics

Complete one of the following (or may be satisfied by placement exam): 5-6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 112 &amp; MATH 113</td>
<td>Algebra and Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 114</td>
<td>Algebra and Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus with Algebra and Trigonometry I</td>
<td></td>
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</tbody>
</table>

Complete one of the following: 3-5

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>STAT 301</td>
<td>Introduction to Statistical Methods</td>
</tr>
<tr>
<td>STAT 371</td>
<td>Introductory Applied Statistics for the Life Sciences</td>
</tr>
</tbody>
</table>

Chemistry

Complete one of the following: 5-9

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHEM 103 &amp; CHEM 104</td>
<td>General Chemistry I and General Chemistry II</td>
</tr>
<tr>
<td>CHEM 109</td>
<td>Advanced General Chemistry</td>
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</tbody>
</table>

Organic Chemistry

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHEM 343</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 344</td>
<td>Introductory Organic Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 345</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
</tbody>
</table>

Introductory Biology

Complete one of the following options: 10

Option 1:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOTANY/BIOLOGY 130</td>
<td>General Botany</td>
</tr>
<tr>
<td>ZOOLOGY/BIOLOGY 101</td>
<td>Animal Biology</td>
</tr>
<tr>
<td>ZOOLOGY/BIOLOGY 102</td>
<td>Animal Biology Laboratory</td>
</tr>
</tbody>
</table>

Option 2:
<table>
<thead>
<tr>
<th>Options</th>
<th>Courses</th>
</tr>
</thead>
</table>
| **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**

Complete 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 General Microbiology  
& MICROBIO 102 and General Microbiology Laboratory  
- MICROBIO 303 Biology of Microorganisms  
& MICROBIO 304 and Biology of Microorganisms Laboratory

**Option 2:**

- BIOCORE 485 Principles of Physiology  
- BIOCORE 486 Principles of Physiology Laboratory  
- BIOCORE 587 Biological Interactions

**Physics**

Complete one of the following: 8-10

- PHYSICS 103 General Physics  
& PHYSICS 104 and General Physics  
- PHYSICS 201 General Physics  
& PHYSICS 202 and General Physics  
- PHYSICS 207 General Physics  
& PHYSICS 208 and General Physics

**Core**

- NUTR SCI/AN SCI/  
DY SCI 311 Comparative Animal Nutrition  
or NUTR SCI 332 Human Nutritional Needs  
- NUTR SCI 431 Nutrition in the Life Span  
- BIOCHEM/NUTR SCI 510 Nutritional Biochemistry and Metabolism

Select one of the following: 3-7

- BIOCHEM 501 Introduction to Biochemistry  
- BIOCHEM 507 General Biochemistry I  
& BIOCHEM 508 and General Biochemistry II

**Electives within the Major**

Complete 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/  
NUTR SCI 560 Principles of Human Disease and Biotechnology  
- BIOCHEM/  
M M & I 575 Biology of Viruses  
- BIOCHEM/  
NUTR SCI 645 Molecular Control of Metabolism and Metabolic Disease  
- 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/AGRONY 338 Plant Breeding and Biotechnology  
- HORT/AGRONY/BOTANY 339 Plant Biotechnology: Principles and Techniques I  
- HORT/AGRONY 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 & 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: Macronutrients  
- NUTR SCI/POP HLTH 621 Epidemiology  
- NUTR SCI 623 Advanced Nutrition: Minerals  
- NUTR SCI 625 Advanced Nutrition: Obesity and Diabetes  
- NUTR SCI/AN SCI 626 Experimental Diet Design  
- NUTR SCI 627 Advanced Nutrition: Vitamins  
- NUTR SCI 631 Clinical Nutrition I  
- NUTR SCI 681 Senior Honors Thesis  
- NUTR SCI 682 Senior Honors Thesis  
- NUTR SCI 691 Senior Thesis-Nutrition  
- NUTR SCI 692 Senior Thesis
NUTR SCI 699  Special Problems 6
ONCOLOGY 401  Introduction to Experimental Oncology
PATH 404  Pathophysiologic Principles of Human Diseases
POP HLTH/ C&E SOC 370  Introduction to Public Health
ZOOLOGY 470  Introduction to Animal Development
ZOOLOGY 570  Cell Biology

Capstone
Complete one of the following: 1-8
NUTR SCI 500  Undergraduate Capstone Seminar Laboratory
NUTR SCI 681 & NUTR SCI 682  Senior Honors Thesis and Senior 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO 365</td>
<td>Medical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>BIOCHEM/ NUTR SCI 560</td>
<td>Principles of Human Disease and Biotechnology</td>
<td>2</td>
</tr>
<tr>
<td>BIOCHEM/ M M &amp; I 575</td>
<td>Biology of Viruses</td>
<td>2</td>
</tr>
<tr>
<td>BIOCHEM/ NUTR SCI 645</td>
<td>Molecular Control of Metabolism and Metabolic Disease</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;E SOC/SOC 533</td>
<td>Public Health in Rural &amp; Urban Communities</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 311</td>
<td>Chemistry Across the Periodic Table</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 327</td>
<td>Fundamentals of Analytical Science</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 329</td>
<td>Fundamentals of Analytical Science</td>
<td>4</td>
</tr>
<tr>
<td>AN SCI/ FOOD SCI 305</td>
<td>Introduction to Meat Science and Technology</td>
<td>4</td>
</tr>
<tr>
<td>FOOD SCI/ AN SCI 321</td>
<td>Food Laws and Regulations</td>
<td>1</td>
</tr>
<tr>
<td>FOOD SCI/ MICROBIO 325</td>
<td>Food Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>GENETICS 545</td>
<td>Genetics Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>HORT/ AGRONOMY 338</td>
<td>Plant Breeding and Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>HORT/ AGRONOMY 360</td>
<td>Genetically Modified Crops: Science, Regulation &amp; Controversy</td>
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</tr>
<tr>
<td>ANAT&amp;PHY 337</td>
<td>Human Anatomy</td>
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<td>Human Anatomy Laboratory</td>
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<td>MED HIST/ PHILOS 515</td>
<td>Public Health Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MED HIST/ PHILOS 558</td>
<td>Ethical Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>M M &amp; I/PATH-BIO 528</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>NUTR SCI/A A E/ AGRONOMY 350</td>
<td>World Hunger and Malnutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUTR SCI 375</td>
<td>Special Topics</td>
<td>1-4</td>
</tr>
<tr>
<td>NUTR SCI 377</td>
<td>Cultural Aspects of Food and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUTR SCI INTER-AG 421</td>
<td>Global Health Field Experience</td>
<td>1-4</td>
</tr>
<tr>
<td>NUTR SCI 500</td>
<td>Undergraduate Capstone Seminar Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NUTR SCI/ KINES 525</td>
<td>Nutrition in Physical Activity and Health</td>
<td>3</td>
</tr>
<tr>
<td>NUTR SCI 540</td>
<td>Community Nutrition and Health Equity</td>
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<td>ONCOLOGY 401</td>
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<td>ZOOLOGY 470</td>
<td>Introduction to Animal Development</td>
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</tr>
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<td>3</td>
</tr>
</tbody>
</table>

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.