

Nutritional Science Undergraduate Program (H SCI)

Curriculum in Nutritional Science

Administered by the Department of Food Science and Human Nutrition

Pre-Health Professional and Research Option

Total Degree Requirement: 120 cr.

Students must fulfill International Perspectives and U.S. Diversity requirements by selecting coursework from approved lists. These courses may also be used to fulfill other area requirements. Only 65 cr. from a two-year institution may apply to the degree which may include up to 16 technical cr.; 9 P-NP cr. of electives; 2.00 minimum GPA.

International Perspectives: 3 cr.

U.S. Diversity: 3 cr.

Communications and Library: 13 cr.

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
ENGL 314	Technical Communication	3
LIB 160	Information Literacy	1
SP CM 212	Fundamentals of Public Speaking	3
Total Credits		13

Humanities and Social Sciences: 6-12 cr.

Select Humanities courses from approved list	3
Select Social Science course from approved list	3
If H Sci student, select:	6
Additional Humanities course	
Additional Humanities or Social Science course	

Ethics and Environmental: 3-6 cr.

FS HN 342	World Food Issues: Past and Present	3
If AgLS student, select from:		2-3
ENV S 120	Introduction to Renewable Resources	
ENV S 201	Introduction to Environmental Issues	

Mathematical Sciences: 6-12 cr.

Select from:		3-8
MATH 140	College Algebra	
MATH 142	Trigonometry and Analytic Geometry	
MATH 160	Survey of Calculus	
MATH 165	Calculus I	
MATH 165 & MATH 166	Calculus I and Calculus II	
MATH 181	Calculus and Mathematical Modeling for the Life Sciences I	
MATH 181 & MATH 182	Calculus and Mathematical Modeling for the Life Sciences I and Calculus and Mathematical Modeling for the Life Sciences II	
Select from:		3-4
STAT 101	Principles of Statistics	
STAT 104	Introduction to Statistics	
Total Credits		6-12

Physical Sciences: 17 cr.

CHEM 177	General Chemistry I	4
CHEM 177L	Laboratory in General Chemistry I	1
CHEM 178	General Chemistry II	3
CHEM 178L	Laboratory in College Chemistry II	1
CHEM 331	Organic Chemistry I	3
CHEM 331L	Laboratory in Organic Chemistry I	1

CHEM 332	Organic Chemistry II	3
CHEM 332L	Laboratory in Organic Chemistry II	1
Total Credits		17

Biological Sciences: 24-26 cr.

BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1
BIOL 212	Principles of Biology II	3
BIOL 212L	Principles of Biology Laboratory II	1
BIOL 255	Fundamentals of Human Anatomy	3
BIOL 255L	Fundamentals of Human Anatomy Laboratory	1
Select from:		3-4
BIOL 306	Metabolic Physiology of Mammals	
BIOL 335	Principles of Human and Other Animal Physiology	
BIOL 313	Principles of Genetics	3
Select from:		3
BIOL 314	Principles of Molecular Cell Biology	
BBMB 301	Survey of Biochemistry	
BBMB 316	Principles of Biochemistry	
Select from:		2-3
MICRO 201	Introduction to Microbiology	
MICRO 302	Biology of Microorganisms	
Select from:		1
MICRO 201L	Introductory Microbiology Laboratory	
MICRO 302L	Microbiology Laboratory	
Total Credits		24-26

Food Science and Human Nutrition: 37 cr.

FS HN 110	Professional and Educational Preparation	1
FS HN 167	Introduction to Human Nutrition	3
FS HN 203	Contemporary Issues in Food Science and Human Nutrition	1
Select at least 3 credits from:		3
FS HN 214	Scientific Study of Food	
FS HN 311	Food Chemistry	
FS HN 419	Foodborne Hazards	
FS HN 420	Food Microbiology	
FS HN 265	Nutrition for Active and Healthy Lifestyles	3
FS HN 360	Advanced Human Nutrition and Metabolism	3
FS HN 361	Nutrition and Health Assessment	2
FS HN 362	Nutrition in Growth and Development	3
FS HN 467	Molecular Basis of Nutrition in Disease Prevention	3
FS HN 480	Professional Communication in Food Science and Human Nutrition	1
FS HN 492	Research Concepts in Human Nutrition	2
Select at least 12 additional credits from:		12
FS HN 242	Societal Impacts on Food Systems	
FS HN 365	Obesity and Weight Management	
FS HN 367	Medical Terminology for Health Professionals	
FS HN 403	Food Laws, Regulations, and the Regulatory Process	
FS HN 461	Medical Nutrition and Disease I	
FS HN 463	Community Nutrition	
FS HN 464	Medical Nutrition and Disease II	
FS HN 466	Nutrition Counseling and Education Methods	
FS HN 490C	Independent Study: Nutrition	
FS HN 499	Undergraduate Research	
FS HN 575	Processed Foods	
NUTRS 501	Biochemical and Physiological Basis of Nutrition: Macronutrients and Micronutrients	
NUTRS 503	Biology of Adipose Tissue	
NUTRS 504	Nutrition and Epigenetic Regulation of Gene Expression	
NUTRS 562	Assessment of Nutritional Status	
Total Credits		37

Electives: 0-12 cr. Select from any university coursework to earn at least 120 total credits.

Students planning to apply to health professional programs should review entrance requirements and select appropriate courses as electives. Many health professional programs also require physics.

Concurrent B.S. and M.S. Program: Well-qualified students in Nutritional Science, pre-health professional and research option, who are interested in graduate study may apply for concurrent enrollment in the Graduate College to simultaneously pursue both a Bachelor of Science (B.S.) degree in Nutritional Science and a Master of Science (M.S.) degree in Nutritional Sciences. For more information, refer to www.fshn.hs.iastate.edu

Nutrition and Wellness Option

Total Degree Requirement: 120 cr.

Students must fulfill International Perspectives and U.S. Diversity requirements by selecting coursework from approved lists. These courses may also be used to fulfill other area requirements. Only 65 cr. from a two-year institution may apply to the degree which may include up to 16 technical cr.; 9 P-NP cr. of electives; 2.00 minimum GPA.

International Perspectives: 3 cr.

U.S. Diversity: 3 cr.

Communications/Library: 10 cr.

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
LIB 160	Information Literacy	1
SP CM 212	Fundamentals of Public Speaking	3
Total Credits		10

Humanities and Social Sciences: 12-15 cr.

Select Humanities course from approved list		3
PSYCH 101	Introduction to Psychology	3
or PSYCH 230	Developmental Psychology	
POL S 215	Introduction to American Government	3
POL S 344	Public Policy	3
If H Sci student, select additional Humanities course		3

Ethics and Environmental: 3-6 cr.

FS HN 342	World Food Issues: Past and Present	3
If AgLS student, select from:		2-3
ENV S 120	Introduction to Renewable Resources	
ENV S 201	Introduction to Environmental Issues	

Mathematical Sciences: 6-8 cr.

Select from:		3-4
MATH 140	College Algebra	
MATH 142	Trigonometry and Analytic Geometry	
MATH 160	Survey of Calculus	
MATH 165	Calculus I	
MATH 181	Calculus and Mathematical Modeling for the Life Sciences I	
Select from:		3-4
STAT 101	Principles of Statistics	
STAT 104	Introduction to Statistics	

Total Credits 6-8

Physical Sciences: 5 cr.

CHEM 163	College Chemistry	4
or CHEM 177	General Chemistry I	
CHEM 163L	Laboratory in College Chemistry	1
or CHEM 177L	Laboratory in General Chemistry I	
Total Credits		5

Biological Sciences: 19 cr.

BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1

BIOL 212	Principles of Biology II	3
BIOL 212L	Principles of Biology Laboratory II	1
BIOL 255	Fundamentals of Human Anatomy	3
BIOL 255L	Fundamentals of Human Anatomy Laboratory	1
BIOL 256	Fundamentals of Human Physiology	3
BIOL 256L	Fundamentals of Human Physiology Laboratory	1
MICRO 201	Introduction to Microbiology	2
MICRO 201L	Introductory Microbiology Laboratory	1
Total Credits		19

Food Systems: 9 cr.

BIOL 173	Environmental Biology	3
or GLOBE 201	Global Resource Systems	
FS HN 242	Societal Impacts on Food Systems	3
Select from:		3
HORT 221	Principles of Horticulture Science	
AGRON 114	Principles of Agronomy	
GLOBE 302	Resource Systems of Developing Nations	
Total Credits		9

Food Science and Human Nutrition: 36 cr.

FS HN 101	Food and the Consumer	3
FS HN 110	Professional and Educational Preparation	1
FS HN 111	Fundamentals of Food Preparation	2
FS HN 115	Food Preparation Laboratory	1
FS HN 167	Introduction to Human Nutrition	3
FS HN 203	Contemporary Issues in Food Science and Human Nutrition	1
FS HN 264	Fundamentals of Nutritional Biochemistry and Metabolism	3
FS HN 265	Nutrition for Active and Healthy Lifestyles	3
FS HN 361	Nutrition and Health Assessment	2
FS HN 364	Nutrition and Prevention of Chronic Disease	3
FS HN 365	Obesity and Weight Management	3
FS HN 366	Communicating Nutrition Messages	3
FS HN 403	Food Laws, Regulations, and the Regulatory Process	2
FS HN 463	Community Nutrition	3
FS HN 480	Professional Communication in Food Science and Human Nutrition	1
FS HN 495	Practicum	2
Total Credits		36

Electives: 9-18 cr. At least 9 credits of electives must be 300-400 level courses. Select from any university coursework to earn at least 120 total credits.