Nutritional Science Undergraduate Program (H SCI)

Other Content

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 at least 3 credits from: 3-8
MATH 140 College Algebra
MATH 143 Preparation for Calculus
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 at least 3 credits 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

Total Credits 17

Biological Sciences: 24-29 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 at least 3 credits from: 3-4
BIOL 256 Fundamentals of Human Physiology & 256L Fundamentals of Human Physiology Laboratory
BIOL 306 Metabolic Physiology of Mammals
BIOL 335 Principles of Human and Other Animal Physiology
BIOL 313 Principles of Genetics 3
Select at least 3 credits from: 3-6
BBMB 301 Survey of Biochemistry
BBMB 316 Principles of Biochemistry
BBMB 404 Biochemistry I & BBMB 405 Biochemistry II
MICRO 201 Introduction to Microbiology or MICRO 302 Biology of Microorganisms
MICRO 201L Introductory Microbiology Laboratory or MICRO 302L Microbiology Laboratory

Total Credits 24-29

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
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 15 additional credits from: 15
BIOL 314 Principles of Molecular Cell Biology
FS HN 214 Scientific Study of Food & FS HN 215 Advanced Food Preparation Laboratory (or FS HN 115 lab)
FS HN 242 Societal Impacts on Food Systems
FS HN 311 Food Chemistry
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 419 Foodborne Hazards
FS HN 420 Food Microbiology
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

Total Credits 37

Iowa State University – 2015-2016
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.

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 3
POL S 314 Special Topics in Comparative Politics 2
or SOC 134 Introduction to Sociology 2
POL S 344 Public Policy 3
If H Sci student, select additional Humanities course 3

Total Credits 12-15

Ethics and Environmental: 3-6 cr.

FS HN 342 World Food Issues: Past and Present 3
If AgLS student, select from:

ENV S 120 Introduction to Renewable Resources 2-3
or ENV S 201 Introduction to Environmental Issues

Total Credits 3-6

Mathematical Sciences: 6-8 cr.

Select at least 3 credits from:

MATH 140 College Algebra 3-4
MATH 143 Preparation for Calculus
MATH 160 Survey of Calculus
MATH 165 Calculus I
MATH 181 Calculus and Mathematical Modeling for the Life Sciences I

Select at least 3 credits from:

STAT 101 Principles of Statistics 3-4
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 3
FS HN 242 Societal Impacts on Food Systems 3
Select from:

HORT 221 Principles of Horticulture Science 3
AGRON 114 Principles of Agronomy 3
GLOBE 302 Resource Systems of Developing Nations 3

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
or BBMB 301 Survey of Biochemistry 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.

Go to FS HN courses.