MASTER OF SCIENCE IN FOOD SCIENCE AND NUTRITION, NUTRITION SPECIALIZATION

The MS degree offers a core curriculum that emphasizes understanding the effects of food and nutrients on the human body. The program includes aspects of professional development, critical thinking, and scientific communication. Electives associated with each of the specializations help prepare students for further studies in doctoral or professional degrees, as well as careers in government agencies, industry, and professional practice. A minimum of 35 credits is required for the M.S. degree.

The Nutrition Specialization includes work in advanced nutrition science and nutrient metabolism, recent developments in human nutrition, and research methods and approaches. The specialization offers flexibility across molecular, community, and clinical nutrition and is suitable for students seeking advanced degrees or professional careers. For students planning to become registered dietitian nutritionists, the MS Program offers courses needed for didactic training in dietetics and could include an added competitive coordinated master's program including dietetic internship (Coordinated MS Program in Dietetics), accredited by the Accreditation Council for Education in Nutrition and Dietetics.

Learn more about the Master's in Food Science and Nutrition, Nutrition Specialization on the Department of Food Science and Human Nutrition website (https://www.chhs.colostate.edu/fshn/programs-and-degrees/m-s-in-food-science-and-nutrition/).

Students interested in graduate work should refer to the Graduate and Professional Bulletin.

Learning Objectives

Upon successful completion, students will be able to:

1. Conduct research meeting the standards of the discipline. This includes identifying an appropriate research problem, critically reviewing the literature, designing and implementing appropriate research protocols, analyzing data, and arriving at appropriate conclusions and implications. Students will be able to communicate the design, methodology, and results of their research both orally and in writing.
2. Demonstrate mastery of fundamental nutrition science/applied science principles while incorporating other core areas, including statistics, biochemistry, physiology, food safety, microbiology, and education.
3. Competently apply nutrition knowledge and skills in a work environment.
4. Effectively disseminate research findings.

Plan A
Effective Fall 2021

Code	Title	Credits
Required Courses		
FSHN 550	Advanced Nutritional Science I	3
FSHN 551	Advanced Nutritional Science II	3
FSHN 640	Selected Topics in Nutritional Epidemiology	2
Select one course from the following:		2
FSHN 650A	Recent Developments in Human Nutrition: Protein, Vitamins, and Minerals	
FSHN 650B	Recent Developments in Human Nutrition: Carbohydrates, Lipids, and Energy	
FSHN 650C	Recent Developments in Human Nutrition: Genomic, Proteomics, and Metabolomics	
FSHN 692	Seminar	1
Thesis		
FSHN 699B	Thesis: Nutrition	10
or FSHN 699C	Thesis: Food Service Management	
Required Statistics/Research Methods Courses – Select one course from the following:		**3-4**
EDRM 600	Introduction to Research Methods	
EDRM 606	Principles: Quantitative Data Analysis	
EDRM 704	Qualitative Research	
EDRM 705	Qualitative Data Analysis	
PSY 652	Methods of Research in Psychology I	
PSY 653	Methods of Research in Psychology II	
STAR 511	Design and Data Analysis for Researchers I	
STAR 512	Design and Data Analysis for Researchers II	
Electives		**10-11**
Select a minimum of 10 credits not taken elsewhere in the program in consultation with the graduate committee (see Example Elective Courses list below)		
Program Total Credits:		**35**

Example Elective Courses

Code	Title	Credits
BC 401	Comprehensive Biochemistry I	3
BC 403	Comprehensive Biochemistry II	3
BC 465	Molecular Regulation of Cell Function	3
BC 517	Metabolism	2
BC 565	Molecular Regulation of Cell Function	4
BC 663	Gene Expression	2
BIOM 526/ECE 526	Biological Physics	3
BMS 430	Endocrinology	3
BMS 500	Mammalian Physiology I	4
BMS 501	Mammalian Physiology II	4
BMS 505/NB 505	Neuronal Circuits, Systems and Behavior	3
BMS 610A	Managing a Career in Science: Survival Skills for Coursework (M.S.)	1
BMS 631	Mechanisms of Hormone Action	2
BMS 632	Metabolic Endocrinology	2
BZ 455	Human Heredity and Birth Defects	3
EDRM 600	Introduction to Research Methods	3
EDRM 606	Principles: Quantitative Data Analysis	3
EDRM 704	Qualitative Research	3
EDRM 705	Qualitative Data Analysis	3
ERHS 542	Biostatistical Methods for Qualitative Data	3
ERHS 544/STAT 544	Biostatistical Methods for Quantitative Data	3
ERHS 567	Cell and Molecular Toxicology Techniques	3

ERHS 611	Cancer Genetics	2
FSHN 445/HDFS 445	Early Childhood Health, Safety, and Nutrition	3
FSHN 496A	Group Study in Dietetics and Nutrition: Energy, Weight Management	1
FSHN 496B	Group Study in Dietetics and Nutrition: Sustainable Food Issues	1
FSHN 496C	Group Study in Dietetics and Nutrition: Nutrition and Chronic Disease	1
FSHN 496D	Group Study in Dietetics and Nutrition: Nutrition for Athletes	1
FSHN 496E	Group Study in Dietetics and Nutrition: Food Safety	1
FSHN 496F	Group Study in Dietetics and Nutrition: Service Marketing	1
FSHN 496G	Group Study in Dietetics and Nutrition: Food and Consumer Issues	1
FSHN 496H	Group Study in Dietetics and Nutrition: Public Health and Policy	1
FSHN 496I	Group Study in Dietetics and Nutrition: Special Topics	1
FSHN 500	Food Systems, Nutrition, and Food Security	2
FSHN 520	Advanced Medical Nutrition Therapy	3
FSHN 525	Nutrition Education Theories and Practice	2
FSHN 540	Nutrigenomics and Advanced Lipid Metabolism	3
FSHN 561	International Nutrition Studies	2
FSHN 600	Responsible Conduct of Research	1
FSHN 620	Community Nutrition Planning and Evaluation	3
FSHN 628	Advanced Nutrition Counseling Techniques	2
FSHN 630/HES 630	Integrative Exercise and Nutrition Metabolism	3
FSHN 650A	Recent Developments in Human Nutrition: Protein, Vitamins, and Minerals	2
FSHN 650B	Recent Developments in Human Nutrition: Carbohydrates, Lipids, and Energy	2
FSHN 650C	Recent Developments in Human Nutrition: Genomic, Proteomics, and Metabolomics	2
FSHN 660	Women's Issues in Lifecycle Nutrition	2
FSHN 686A	Practicum: Counseling	1-3
FSHN 686B	Practicum: Nutrition	1-3
FSHN 695B	Independent Study: Nutrition	1-3
FSHN 700	Cellular Nutrition	2
FSHN 750	Nutritional Basis of Chronic Disease	2
FSHN 792	Seminar-Research Topics in Nutrition	1
FSHN 795	Independent Study	1-4
FTEC 570	Food Product Development	2
FTEC 578/HORT 578	Phytochemicals and Probiotics for Health	3
GRAD 792	Seminar on College Teaching	2
HDFS 608	Program Planning and Implementation	3
HES 603	Advanced Topics in Exercise Physiology	3
HES 610	Exercise Bioenergetics	3
HES 630/FSHN 630	Integrative Exercise and Nutrition Metabolism	3
HORT 579	Mass Spectrometry Omics-Methods and Analysis	3
JTC 614	Public Communication Campaigns	3
JTC 630	Health Communication	3
JTC 661	Information Design	3
JTC 662	Communicating Science and Technology	3
MIP 540	Biosafety in Research Laboratories	2
MIP 555	Principles and Mechanisms of Disease	3
MIP 612	Applied Immunology	3
MIP 614	Medical Microbiology	3
PSY 652	Methods of Research in Psychology I	4
PSY 653	Methods of Research in Psychology II	4
STAR 511	Design and Data Analysis for Researchers I	4
STAR 512	Design and Data Analysis for Researchers II	4
VS 562	Applied Data Analysis	3

A minimum of 35 credits are required to complete this program.

Plan B
Effective Fall 2021

Code	Title	Credits
Required Courses		
FSHN 550	Advanced Nutritional Science I	3
FSHN 551	Advanced Nutritional Science II	3
FSHN 640	Selected Topics in Nutritional Epidemiology	2
Select one course from the following:		2
FSHN 650A	Recent Developments in Human Nutrition: Protein, Vitamins, and Minerals	
FSHN 650B	Recent Developments in Human Nutrition: Carbohydrates, Lipids, and Energy	
FSHN 650C	Recent Developments in Human Nutrition: Genomic, Proteomics, and Metabolomics	
FSHN 692	Seminar	1
Research Project – Select one course from the following:		**4**
FSHN 698A	Research: Dietetics	
FSHN 698B	Research: Nutrition	
FSHN 698C	Research: Food Service Management	
Required Statistics/Research Methods Courses – Select one course from the following:		**3-4**
EDRM 600	Introduction to Research Methods	
EDRM 606	Principles: Quantitative Data Analysis	
EDRM 704	Qualitative Research	
EDRM 705	Qualitative Data Analysis	
PSY 652	Methods of Research in Psychology I	
PSY 653	Methods of Research in Psychology II	
STAR 511	Design and Data Analysis for Researchers I	
STAR 512	Design and Data Analysis for Researchers II	
Electives		**16-17**

Select a minimum of 16 credits not taken elsewhere in the program in consultation with the graduate committee (see Example Elective Courses list below)	
Program Total Credits:	**35**

Example Elective Courses

Code	Title	Credits
BC 401	Comprehensive Biochemistry I	3
BC 403	Comprehensive Biochemistry II	3
BC 465	Molecular Regulation of Cell Function	3
BC 517	Metabolism	2
BC 565	Molecular Regulation of Cell Function	4
BC 663	Gene Expression	2
BIOM 526/ECE 526	Biological Physics	3
BMS 430	Endocrinology	3
BMS 500	Mammalian Physiology I	4
BMS 501	Mammalian Physiology II	4
BMS 505/NB 505	Neuronal Circuits, Systems and Behavior	3
BMS 610A	Managing a Career in Science: Survival Skills for Coursework (M.S.)	1
BMS 631	Mechanisms of Hormone Action	2
BMS 632	Metabolic Endocrinology	2
BZ 455	Human Heredity and Birth Defects	3
EDRM 600	Introduction to Research Methods	3
EDRM 606	Principles: Quantitative Data Analysis	3
EDRM 704	Qualitative Research	3
EDRM 705	Qualitative Data Analysis	3
ERHS 542	Biostatistical Methods for Qualitative Data	3
ERHS 544/STAT 544	Biostatistical Methods for Quantitative Data	3
ERHS 567	Cell and Molecular Toxicology Techniques	3
ERHS 611	Cancer Genetics	2
FSHN 445/HDFS 445	Early Childhood Health, Safety, and Nutrition	3
FSHN 496A	Group Study in Dietetics and Nutrition: Energy, Weight Management	1
FSHN 496B	Group Study in Dietetics and Nutrition: Sustainable Food Issues	1
FSHN 496C	Group Study in Dietetics and Nutrition: Nutrition and Chronic Disease	1
FSHN 496D	Group Study in Dietetics and Nutrition: Nutrition for Athletes	1
FSHN 496E	Group Study in Dietetics and Nutrition: Food Safety	1
FSHN 496F	Group Study in Dietetics and Nutrition: Service Marketing	1
FSHN 496G	Group Study in Dietetics and Nutrition: Food and Consumer Issues	1
FSHN 496H	Group Study in Dietetics and Nutrition: Public Health and Policy	1
FSHN 496I	Group Study in Dietetics and Nutrition: Special Topics	1
FSHN 500	Food Systems, Nutrition, and Food Security	2
FSHN 520	Advanced Medical Nutrition Therapy	3
FSHN 525	Nutrition Education Theories and Practice	2
FSHN 540	Nutrigenomics and Advanced Lipid Metabolism	3
FSHN 561	International Nutrition Studies	2
FSHN 600	Responsible Conduct of Research	1
FSHN 620	Community Nutrition Planning and Evaluation	3
FSHN 628	Advanced Nutrition Counseling Techniques	2
FSHN 630/HES 630	Integrative Exercise and Nutrition Metabolism	3
FSHN 650A	Recent Developments in Human Nutrition: Protein, Vitamins, and Minerals	2
FSHN 650B	Recent Developments in Human Nutrition: Carbohydrates, Lipids, and Energy	2
FSHN 650C	Recent Developments in Human Nutrition: Genomic, Proteomics, and Metabolomics	2
FSHN 660	Women's Issues in Lifecycle Nutrition	2
FSHN 686A	Practicum: Counseling	1-3
FSHN 686B	Practicum: Nutrition	1-3
FSHN 695B	Independent Study: Nutrition	1-3
FSHN 700	Cellular Nutrition	2
FSHN 750	Nutritional Basis of Chronic Disease	2
FSHN 792	Seminar-Research Topics in Nutrition	1
FSHN 795	Independent Study	1-4
FTEC 570	Food Product Development	2
FTEC 578/HORT 578	Phytochemicals and Probiotics for Health	3
GRAD 792	Seminar on College Teaching	2
HDFS 608	Program Planning and Implementation	3
HES 603	Advanced Topics in Exercise Physiology	3
HES 610	Exercise Bioenergetics	3
HORT 579	Mass Spectrometry Omics-Methods and Analysis	3
JTC 614	Public Communication Campaigns	3
JTC 630	Health Communication	3
JTC 661	Information Design	3
JTC 662	Communicating Science and Technology	3
MIP 540	Biosafety in Research Laboratories	2
MIP 555	Principles and Mechanisms of Disease	3
MIP 612	Applied Immunology	3
MIP 614	Medical Microbiology	3
STAR 511	Design and Data Analysis for Researchers I	4
STAR 512	Design and Data Analysis for Researchers II	4
VS 562	Applied Data Analysis	3

A minimum of 35 credits are required to complete this program.

Requirements for All Graduate Degrees

For more information, please visit Requirements for All Graduate Degrees (http://catalog.colostate.edu/general-catalog/graduate-bulletin/graduate-study/procedures-requirements-all-degrees/) in the Graduate and Professional Bulletin (http://catalog.colostate.edu/general-catalog/graduate-bulletin/).

Summary of Procedures for the Master's and Doctoral Degrees

NOTE: Each semester the Graduate School publishes a schedule of deadlines. Deadlines are available on the Graduate School website (https://graduateschool.colostate.edu/deadline-dates/). Students should consult this schedule whenever they approach important steps in their careers.

Forms (https://graduateschool.colostate.edu/forms/) are available online.

Step	Due Date
1. Application for admission (online)	Six months before first registration
2. Diagnostic examination when required	Before first registration
3. Appointment of advisor	Before first registration
4. Selection of graduate committee	Before the time of fourth regular semester registration
5. Filing of program of study (GS Form 6)	Before the time of fourth regular semester registration
6. Preliminary examination (Ph.D. and PD)	Two terms prior to final examination
7. Report of preliminary examination (GS Form 16) - (Ph.D. and PD)	Within two working days after results are known
8. Changes in committee (GS Form 9A)	When change is made
9. Application for Graduation (GS Form 25)	Refer to published deadlines from the Graduate School Website
9a. Reapplication for Graduation (online)	Failure to graduate requires Reapplication for Graduation (online) for the next time term for which you are applying
10. Submit thesis or dissertation to committee	At least two weeks prior to the examination or at the discretion of the graduate committee
11. Final examination	Refer to published deadlines from the Graduate School Website
12. Report of final examination (GS Form 24)	Within two working days after results are known; refer to published deadlines from the Graduate School website
13. Submit a signed Thesis/ Dissertation Submission Form (GS Form 30) to the Graduate School and Submit the Survey of Earned Doctorates (Ph.D. only) prior to submitting the electronic thesis/ dissertation	Refer to published deadlines from the Graduate School website.
14. Submit the thesis/dissertation electronically	Refer to published deadlines from the Graduate School website
15. Graduation	Ceremony information is available from the Graduate School website