PH.D. IN FOOD SCIENCE AND NUTRITION, FOOD SCIENCE SPECIALIZATION

The Ph.D. in Food Science and Nutrition, Food Science Specialization includes advanced studies oriented toward food science, food chemistry, food microbiology, food preservation and safety, and health properties of foods and food components.

Most students entering this Ph.D. program will bring in 30 credits from a Master's program in a related field. The curriculum represents a total of 42 credits beyond the Master's level. If a prospective student has less than 30 credits toward the program, an individualized curriculum plan will be developed by working with a primary advisor to cover possible deficiencies.

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

Requirements Effective Fall 2021

Code	Title	Credits
Required Courses		
FTEC 570	Food Product Development	2
FTEC 572	Food Biotechnology	2
FTEC 574	Current Issues in Food Safety	2
FTEC 576	Cereal Science	2
FTEC 578/HORT 578	Phytochemicals and Probiotics for Health	3
FSHN 600	Responsible Conduct of Research	1
or GRAD 544	Ethical Conduct of Research	
FSHN 692	Seminar	2
Dissertation (minimum of 10 credits)		
FTEC 799	Dissertation	10
Required Statistics/Research Methods – Select two courses from the following:		**6-8**
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		**10-12**
Select a minimum of 10 credits not taken elsewhere in the program in consultation with the graduate committee (see example Elective Courses list below)		
Master's Degree Credit (a maximum of 30 credits may be accepted from a master's degree)		**30**

Example Elective Courses

Code	Title	Credits
ANEQ 565	Interpreting Animal Science Research	3
ANEQ 567	HACCP Meat Safety	2
ANEQ 660	Topics in Meat Safety	1
BC 463	Molecular Genetics	3
BC 513	Enzymology	1
BC 517	Metabolism	2
BC 565	Molecular Regulation of Cell Function	4
BC 665A	Advanced Topics in Cell Regulation: Microscopic Methods	2
BC 665B	Advanced Topics in Cell Regulation: Modern Methods	2
BC 701	Grant Proposal Writing and Reviewing	1
BMS 500	Mammalian Physiology I	4
BMS 501	Mammalian Physiology II	4
CBE 504/BIOM 504	Fundamentals of Biochemical Engineering	3
CHEM 431	Instrumental Analysis	4
CM 502/NB 502	Techniques in Molecular & Cellular Biology	2
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 510/VS 510	Cancer Biology	3
ERHS 611	Cancer Genetics	2
FSHN 500	Food Systems, Nutrition, and Food Security	2
FSHN 540	Nutrigenomics and Advanced Lipid Metabolism	3
FSHN 550	Advanced Nutritional Science I	3
FSHN 551	Advanced Nutritional Science II	3
FSHN 561	International Nutrition Studies	2
FSHN 640	Selected Topics in Nutritional Epidemiology	2
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 695A	Independent Study: Food Science	1-3
FSHN 696A	Group Study: Food Science	1-3
FSHN 792	Seminar-Research Topics in Nutrition	1
HORT 401	Medicinal and Value-Added Uses of Plants	3
JTC 662	Communicating Science and Technology	3
MIP 443	Microbial Physiology	4
MIP 450	Microbial Genetics	3
MIP 533/VS 533	Epidemiology of Infectious Diseases/ Zoonoses	3
MIP 555	Principles and Mechanisms of Disease	3
MIP 624	Advanced Topics in Microbial Ecology	2
MIP 651	Immunobiology	3
PSY 652	Methods of Research in Psychology I	4
PSY 653	Methods of Research in Psychology II	4
SOCR 755	Advanced Soil 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

Most students entering this Ph.D. program will bring in 30 credits from a Master's program in a related field. The above curriculum represents a total of 42 credits beyond the Master's level. If a prospective student has less than 30 credits toward the program, an individualized curriculum plan will be developed by working with a primary advisor to cover possible deficiencies.