Twin Cities Campus

Food Science Ph.D.

Food Science & Nutrition

College of Food, Agricultural and Natural Resource Sciences

Link to a list of faculty for this program.

Contact Information:
Department of Food Science and Nutrition, 225 Food Science and Nutrition Building, 1334 Eckles Avenue, Saint Paul, MN 55108 (612-624-6753; fax: 612-625-5272)
Email: fsgrad@umn.edu
Website: http://fscn.cfans.umn.edu/graduate_programs/foodsciencegraduate/index.htm

- Program Type: Doctorate
- Requirements for this program are current for Spring 2018
- Length of program in credits: 48
- This program does not require summer semesters for timely completion.
- Degree: Doctor of Philosophy

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

Food science applies scientific principles to the manufacture, distribution, marketing, and consumer aspects of food. Food scientists apply the basic principles and techniques of many disciplines, including chemistry, physics, microbiology, and nutrition, to food processing and preservation, new product development, and food marketing. Food scientists are concerned with the theoretical and practical aspects of the food chain, from the production of raw materials to the use of food products by consumers. Students may emphasize the chemistry, engineering, microbiology, nutrition, or technology of food products.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

Applicants to the program need a bachelor's degree in any field or its international equivalent along with demonstrated research ability such as a MS degree or publications.

Other requirements to be completed before admission:
The minimum requirements are general chemistry with laboratory, organic chemistry with laboratory, physics with laboratory, biology with laboratory, and calculus. If preparation appears inadequate, certain additional courses may be required after admission. Graduate Record Examination (GRE) General Test scores, and the TOEFL (for international students) are also required.

Applicants must submit their test score(s) from the following:

- GRE

International applicants must submit score(s) from one of the following tests:

- TOEFL
  - Internet Based - Total Score: 79
  - Internet Based - Writing Score: 21
  - Internet Based - Reading Score: 19
  - Paper Based - Total Score: 550
- IELTS
  - Total Score: 6.5
- MELAB
  - Final score: 80

The preferred English language test is Test of English as Foreign Language

Key to test abbreviations(GRE, TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the General Information section of the

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catalog website.

Program Requirements

24 credits are required in the major.
0 credits are required outside the major.
24 thesis credits are required.

This program may be completed with a minor.

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum GPA of 3.00 is required for students to remain in good standing.

At least 1 semesters must be completed before filing a Degree Program Form.

All students also must participate as teaching assistants during their graduate career.

Required Courses

All students must take the following courses
FSCN 4112 - Food Chemistry and Functional Foods (3.0 cr)
FSCN 4121 - Food Microbiology (3.0 cr)
FSCN 4332 *{Inactive}*(3.0 cr)
FSCN 8318 - Current Issues in Food Science (2.0 cr)

Course Options

Students must choose one of the following courses.
FSCN 5122 - Food Fermentations and Biotechnology (2.0 cr)
or FSCN 5131 - Food Quality for Graduate Credit (3.0 cr)
or FSCN 5312 - Food Analysis (4.0 cr)

FSCN Elective Credits

Students must take at least three (3) FSCN course credits at the 5xxx or 8xxx level in addition to the courses listed above.

Thesis Credits

Food Science PhD students must take 24 thesis credits.
FSCN 8888 - Thesis Credit: Doctoral (1.0 - 24.0 cr)

Elective Courses

Students complete additional 5xxx and 8xxx level FSCN courses, in consultation with their advisor, to total at least 24 credits.
FSCN 5xxx
FSCN 8xxx

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