

# FOOD SCIENCE

## Degree Requirements

### Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

A minimum of 30 credits at the 400, 500, 600 or 800 level is required, with at least 18 credits in the 500 and 600 series, combined. There are 24 credits required in the following core courses:

Code	Title	Credits
<b>Required Courses</b>		
FDSC 500A	Fundamentals of Food Science - Microbiology	1
FDSC 500B	Fundamentals of Food Science - Engineering	1
FDSC 500C	Fundamentals of Food Science - Chemistry	1
FDSC 500D	Fundamentals of Food Science - Nutrition	1
FDSC 501	Research Methods in Food Science	2
6 credits of other 500-level FDSC courses (3 credits of the requirement can be satisfied by 400-level Food Science courses with permission of the adviser.)		6
6 credits of 400- or 500-level courses - must include Statistics (STAT 500 or equivalent)		6
<b>Electives</b>		
The remaining 6 credits may be chosen from a list of approved electives maintained by the program office.		6
<b>Culminating Experience</b>		
FDSC 600	Thesis Research	6
<b>Total Credits</b>		<b>30</b>

In addition, M.S. students are required to complete 1 credit of FDSC 602: Supervised Experience in College Teaching prior to the TA experience; however, this 1 credit cannot be counted towards the minimum 30 credits required.

The M.S. degree also requires the formation of a master's committee, the writing of a satisfactory thesis accepted by the master's committee, the head of the graduate program, and the Graduate School, and the passing of a final oral examination.

International students must also take the American English Oral Communicative Proficiency Test (AEOCPT).

### Doctor of Philosophy (Ph.D.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

A minimum of 12 credits is required for the Ph.D. degree; Ph.D. students who did not complete an M.S. in Food Science or related field must complete 12 additional credits, for a minimum of 24 credits:

Code	Title	Credits
<b>Required Courses</b>		
FDSC 500A	Fundamentals of Food Science - Microbiology <sup>1</sup>	1
FDSC 500B	Fundamentals of Food Science - Engineering <sup>1</sup>	1
FDSC 500C	Fundamentals of Food Science - Chemistry <sup>1</sup>	1

FDSC 500D	Fundamentals of Food Science - Nutrition <sup>1</sup>	1
FDSC 501	Research Methods in Food Science <sup>1</sup>	2
6 credits of other 500-level FDSC courses (3 credits of the requirement can be satisfied by 400 level Food Science courses with permission of the adviser.)		6
Students must have satisfactorily completed at least one 400 or 500-level course in statistics (i.e., STAT 500 Applied Statistics or equivalent), during their undergraduate or graduate program		
<b>Total Credits</b>		<b>12</b>

<sup>1</sup> Not needed if student received credit for these courses during master's degree program at Penn State.

In addition, Ph.D. students are required to complete 1 credit of FDSC 602: Supervised Experience in College Teaching prior to the TA experience; however, this 1 credit cannot be counted towards the minimum credits required for the degree.

Except in special cases, an M.S. in Food Science is earned before pursuing a Ph.D. degree. Although most applicants to the Ph.D. program have already obtained a master's degree in Food Science or a related program, the M.S. degree is not a prerequisite for entrance into the doctoral program. For students entering the Ph.D. program without having earned an M.S. degree in Food Science or related field, 12 additional credits are required:

- FDSC 600, 6 credits
- Additional 400 or 500-level FDSC courses, 6 credits

All doctoral students must pass a qualifying examination, a comprehensive written and oral examination, and a final oral examination (the dissertation defense). To earn the Ph.D. degree, doctoral students must also write a dissertation that is accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School. In addition, all Food Science Ph.D. candidates are assessed for English competency. International students must also take the American English Oral Communicative Proficiency Test (AEOCPT).