# Food Science (PhD)

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS 501</td>
<td>Advanced Nutrition and Metabolism</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 555</td>
<td>Exercise Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NTR 701</td>
<td>Protein and Amino Acid Metabolism</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NTR 706</td>
<td>Vitamin Metabolism</td>
<td>3</td>
<td></td>
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<tr>
<td>NTR 708</td>
<td>Energy Metabolism</td>
<td>3</td>
<td></td>
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<tr>
<td>NTR 775</td>
<td>Mineral Metabolism</td>
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</tbody>
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### Processing Technology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS 516</td>
<td>Quality Control in Food and Bioprocessing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 522</td>
<td>Food Packaging</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 530</td>
<td>Post-Harvest Food Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 535</td>
<td>Food Safety Management Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 751</td>
<td></td>
<td>4</td>
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</table>

### Elective Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS 520</td>
<td>Pre-Harvest Food Safety</td>
<td>3</td>
<td></td>
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<tr>
<td>FS 526</td>
<td>Upstream Biomanufacturing Laboratory</td>
<td>2</td>
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<tr>
<td>FS 550</td>
<td>Food Industry Study Tour</td>
<td>2</td>
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</tr>
<tr>
<td>FS 554</td>
<td>Lactation, Milk, and Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 557</td>
<td>Nutraceuticals and Functional Foods</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FS 562</td>
<td>Postharvest Physiology</td>
<td>3</td>
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</tr>
<tr>
<td>FS 580</td>
<td>Professional Development and Ethics in Food Safety</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Core Courses

Select courses from at least three categories below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS 567</td>
<td>Sensory Analysis of Foods</td>
<td>3</td>
<td></td>
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<tr>
<td>FS 741</td>
<td>Thermal Processing of Foods</td>
<td>3</td>
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<tr>
<td>FS 540</td>
<td>Food Safety and Public Health</td>
<td>3</td>
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<tr>
<td>FS 725</td>
<td>Fermentation Microbiology</td>
<td>3</td>
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### Supervised Teaching Course

- FS 885 Doctoral Supervised Teaching
  - 2 hours

### Seminar Course

- FS 780 Seminar In Food Science
  - 1 hour

### Research Ethics Course

- 1 hour

### Additional Courses

- 53 hours

### Total Hours

- 72 hours

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1. Two semesters of FS 885 Doctoral Supervised Teaching are required.
2. Additional Courses may include FS 895 Doctoral Dissertation Research, FS courses, optional minor courses, and/or interdisciplinary courses.

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**Full Professors**

- Jonathan C. Allen
- Kenneth E. Anderson
- Rodolphe Barrangou
- Frederick Breidt
Benjamin James Chapman
Lisa Louise Dean
Mary Anne Drake
Lora Suzanne Goodell
Scott A. Hale
Gabriel Keith Harris
Hosni Moustafa Hassan
Lee-Ann Jaykus
Sophia Kathariou
Saad A. Khan
Colin David Kay
Mary Ann Lila
K. P. Sandeep
John Douglas Sheppard

Josip Simunovic
Nicola Singletary

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**Adjunct Faculty**
Pablo Marcelo Coronel
Jack Parker Davis
Brian E. Farkas
Mario Giovanni Ferruzzi
William Ronald Aimutis Jr.
Katherine Patterson Maloney
Tawanda Muzhingi
Shengmin Sang

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**Associate Professors**
April Fogleman
Dana J. Hanson
Suzanne Dunn Johanningsmeier
Slavko Komarnytsky
Andrew Peter Neilson
Ilenys Muniz Perez-Diaz
Clinton Dale Stevenson

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**Assistant Professors**
Alexander Vladimirovich Chouljenko
Lynette Marie Johnston
Marvin Leonel Moncada Reyes
Deepti Arvind Salvi
Ondulla Tyvette Toomer
Minliang Yang
Haotian Zheng

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**Practice/Research/Teaching Professors**
Fernanda Bottaro de Oliveira Santos