## Food Science (PhD)

### Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Courses</strong></td>
<td></td>
<td><strong>18</strong></td>
</tr>
<tr>
<td>FS 780</td>
<td>Seminar In Food Science</td>
<td></td>
</tr>
<tr>
<td>FS 885</td>
<td>Doctoral Supervised Teaching</td>
<td></td>
</tr>
<tr>
<td>Select courses from at least three categories listed under &quot;Core Courses&quot; below</td>
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</tr>
<tr>
<td><strong>Research Ethics Course</strong></td>
<td></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>Select one Research Ethics Course approved in conjunction with the academic committee</td>
<td></td>
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<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
<td><strong>53</strong></td>
</tr>
<tr>
<td>Select a minimum of six courses of 500- to 700-level courses approved in conjunction with the academic committee – see “Elective Courses” listed below</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>72</strong></td>
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</tbody>
</table>

### Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS 567</td>
<td>Sensory Analysis of Foods</td>
<td>3</td>
</tr>
<tr>
<td>FS 741</td>
<td>Thermal Processing of Foods</td>
<td>3</td>
</tr>
<tr>
<td>FS 725</td>
<td>Fermentation Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>FS 501</td>
<td>Advanced Nutrition and Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>FS 555</td>
<td>Exercise Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NTR 701</td>
<td>Protein and Amino Acid Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>NTR 706</td>
<td>Vitamin Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>NTR 708</td>
<td>Energy Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>NTR 775</td>
<td>Mineral Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>FS 516</td>
<td>Quality Control in Food and Bioprocessing</td>
<td>3</td>
</tr>
<tr>
<td>FS 522</td>
<td>Food Packaging</td>
<td>3</td>
</tr>
<tr>
<td>FS 530</td>
<td>Post-Harvest Food Safety</td>
<td>3</td>
</tr>
<tr>
<td>FS 535</td>
<td>Food Safety Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>FS 751</td>
<td>Food Ingredient Technology In Product Development</td>
<td>4</td>
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</table>

### Elective Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select courses below:</td>
<td></td>
<td><strong>53</strong></td>
</tr>
<tr>
<td>Additional courses may be selected in conjunction with the academic committee</td>
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<tr>
<td>FS 520</td>
<td>Pre-Harvest Food Safety</td>
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</tr>
<tr>
<td>FS 526</td>
<td>Upstream Biomanufacturing Laboratory</td>
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<tr>
<td>FS 550</td>
<td>Food Industry Study Tour</td>
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</tr>
<tr>
<td>FS 554</td>
<td>Lactation, Milk, and Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

### Faculty

**Full Professors**
- Jonathan C. Allen
- Kenneth E. Anderson
- Rodolphe Barrangou
- Frederick Breidt
- Benjamin James Chapman
- Patricia Ann Curtis
- Lisa Louise Dean
- Mary Anne Drake
- Mario Giovanni Ferruzzi
- Scott A. Hale
- Hosni Moustafa Hassan
- Lee-Ann Jaykus
- Sophia Kathariou
- Saad A. Khan
- Duane K. Larick
- Mary Ann Lila
- Richard Linton
- K. P. Sandeep
- Muquarrab Quresh
- John Douglas Sheppard

**Associate Professors**
- Ilenys Muniz Perez Diaz
- April Fogleman
- Lora Suzanne Goodell
- Dana J. Hanson
- Gabriel Keith Harris
- Suzanne Dunn Johanningsmeier
- Colin David Kay
- Slavko Komarnytsky
- Andrew Peter Neilson
Clinton Dale Stevenson

Assistant Professors
Alexander Vladimirovich Chouljenko
Natalie Kathleen Cooke
Lynette Marie Johnston
Marvin Leonel Moncada Reyes
Deepti Arvind Salvi
Nicola Singletary
Ondulla Tyvette Toomer
Haotian Zheng

Practice/Research/Teaching Professors
Josip Simunovic
Fernanda Bottaro de Oliveira Santos

Emeritus Faculty
Sarah Liberman Ash
Leonard W. Aurand
Hershel R. Ball Jr
Leon Carl Boyd
Roy E. Carawan
Daniel E Carroll Jr
George L. Catignani
Edward Allen Foegeding
David Patrick Green
Max E. Gregory
Victor A. Jones
Todd Robert Klaenhammer
Carolyn Jean Lackey
Tyre C. Lanier
Roger Floyd McFeeters
James Leslie Oblinger
John Eual Rushing
Timothy H. Sanders
Steven J. Schwartz
Brian W. Sheldon

Harold E. Swaisgood
Kenneth R. Swartzel
Van-Den Truong
Lynn G. Turner
William M. Walter
Donn R. Ward

Adjunct Professors
William Ronald Aimutis Jr.
Alejandro Amezquita
Pablo Marcelo Coronel
Christopher R. Daubert
Jack Parker Davis
Brian E. Farkas
Katherine Patterson Maloney
Tawanda Muzhingi
Shengmin Sang
Ratna Rani Sharma
Richard C. Theuer