# MS NUTRITION

## Program Learning Objectives

After successfully completing the Master of Science in Nutrition, students will be able to:

1. Apply fundamental principles of nutrition science in research and required coursework
2. Explain, analyze, and interpret fundamental scientific concepts in the specific area of thesis research
3. Apply the scientific method to nutrition research through the design, conduct, and defense of a thesis research project
4. Apply critical thinking skills to the analysis of published research literature and the design/interpretation of a thesis research project
5. Show independent and creative thinking skills in the formulation, design, conduct, and interpretation of nutrition research
6. Demonstrate strong written and oral communication skills
7. Work productively, respectfully, and professionally as part of a research team and in other group settings
8. Exhibit leadership, ethical conduct, and community values

### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSN 516</td>
<td>Population Health and Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>FSN 528</td>
<td>Biochemical and Molecular Aspects of Human Macronutrient Metabolism</td>
<td>4</td>
</tr>
<tr>
<td>FSN 529</td>
<td>Metabolic and Molecular Aspects of Vitamins</td>
<td>2</td>
</tr>
<tr>
<td>FSN 530</td>
<td>Metabolic and Molecular Aspects of Minerals</td>
<td>2</td>
</tr>
<tr>
<td>FSN 582</td>
<td>Current Nutrition Research</td>
<td>3</td>
</tr>
<tr>
<td>FSN 599</td>
<td>Thesis</td>
<td>6</td>
</tr>
<tr>
<td>STAT 511</td>
<td>Statistical Methods</td>
<td>4</td>
</tr>
</tbody>
</table>

### Approved Electives

- See approved electives list below.

**Total units**: 45

## Approved Electives

Select from one of the three Emphasis Areas in consultation with thesis supervisor (at least 3 units must be at the 500-level):

### Molecular Nutrition Emphasis Area

Select from the following:

- ASCI 403 Applied Biotechnology in Animal Science
- ASCI 420 Animal Metabolism and Nutrition
- BIO 441 Bioinformatics Applications
- BIO 475 Molecular Biology Laboratory
- BIO 476 Gene Expression Laboratory
- BIO 501 Molecular & Cellular Biology
- CHEM 428 Nutritional Biochemistry
- CHEM 474 Protein Techniques Laboratory
- FSN 500 Individual Study
- FSN 505 Orientation to Graduate Studies
- FSN 581 Graduate Seminar in Food Science and Nutrition
- STAT 513 Applied Experimental Design and Regression Models
- STAT 523 Design and Analysis of Experiments I

### Public Health Nutrition Emphasis Area

Select from the following:

- FSN 500 Individual Study
- FSN 505 Orientation to Graduate Studies
- FSN 581 Graduate Seminar in Food Science and Nutrition
- KINE 503 Current Health Issues
- KINE 510 Advanced Health Behavior Change Programs
- STAT 417 Survival Analysis Methods
- STAT 419 Applied Multivariate Statistics
- STAT 421 Survey Sampling and Methodology
- STAT 513 Applied Experimental Design and Regression Models
- STAT 524 Applied Regression Analysis
- STAT 530 Statistical Computing with SAS

### Health and Wellness Emphasis Area

Select from the following:

- COMS 418 Health Communication
- FSN 500 Individual Study
- FSN 505 Orientation to Graduate Studies
- FSN 581 Graduate Seminar in Food Science and Nutrition
- KINE 408 Exercise and Health Gerontology
- KINE 434 Health Promotion Program Planning
- KINE 450 Worksite and University Health Promotion Programs
- KINE 504 Advanced Pathophysiology and Exercise
- KINE 522 Advanced Biomechanics
- KINE 525 Advanced Motor Learning and Control
- KINE 526 Advanced Sport and Exercise Psychology
- KINE 530 Advanced Physiology of Exercise
- PSY 465 Cross-Cultural International Psychology
- STAT 513 Applied Experimental Design and Regression Models