FOOD SCIENCE & HUMAN NUTRITION: HUMAN NUTRITION, MS

for the Master of Science in Food Science and Human Nutrition Human:
Human Nutrition Concentration

department head: Nicki Engeseth
associate head of graduate programs: Michael Miller (mille216@illinois.edu)
overview of admissions & requirements: https://fshn.illinois.edu/graduate/apply
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply
department website: https://fshn.illinois.edu/
program website: https://fshn.illinois.edu/graduate/human-nutrition
department faculty: https://fshn.illinois.edu/directory/faculty/
college website: https://aces.illinois.edu/
address: 260 Bevier Hall, 905 South Goodwin Avenue, Urbana, IL 61801
phone: (217) 244-4498
e-mail: FSHNGradAdmissions@illinois.edu (fshngradadmissions@illinois.edu)

On Campus: Master of Science in Food Science and Human Nutrition, students are required to select a concentration:

Food Science (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-ms/food-science/)

Human Nutrition (p. 1)

Online: The focus of the online Master of Science in Food Science and Human Nutrition (https://fshn.illinois.edu/online/) is Food Science. Students are not required to select a concentration.

Graduate Degree Programs in Food Science & Human Nutrition
Graduate Majors:

Food Science & Human Nutrition, MS (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-ms/) (on campus & online)

concentrations:

Food Science (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-ms/food-science/)

Human Nutrition (p. 1)

Food Science and Human Nutrition, MS – Professional Science Master's (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-ms/professional-science-masters/)

Food Science and Human Nutrition, PhD (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-phd/)

concentrations:

Food Science (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-phd/food-science/)

Human Nutrition (http://catalog.illinois.edu/graduate/aces/food-science-human-nutrition-phd/human-nutrition/)

Joint Degree Program:

Food Science & Human Nutrition, PhD and Master of Public Health, MPH (http://catalog.illinois.edu/graduate/aces_ahs/joint-degree/food-science-human-nutrition-phd-public-health-mph/)

Research Areas

In addition to receiving training in the general field of food science or human nutrition, students have the opportunity to conduct research in the following areas of specialization:

- Food processing, engineering, and biotechnology
- Food ingredients, properties, and interactions
- Food microstructures, micro-carriers, and nanotechnology
- Food chemistry
- Food microbiology and biomass conversion
- Food safety and security
- Sensory sciences
- Dietary quality and food and nutrition patterns for optimal health
- Nutrition and disease interactions, including cancer, metabolic disorders, and gastrointestinal health
- Nutrition across the life span
- Biochemical and molecular nutrition
- Clinical nutrition
- Community nutrition

For additional information go to fshn.illinois.edu/graduate (http://fshn.illinois.edu/graduate/).

The PSM involves rigorous scientific training in the area of food science and/or human nutrition; additionally, instruction is provided in applied business knowledge and skills. This program is designed for those who seek careers in a science-based setting with significant managerial and leadership responsibilities. For additional information go to psm.illinois.edu/prospectivestudents/programs/foodscience.htm (http://psm.illinois.edu/prospectivestudents/programs/foodscience.htm).

Information listed in this catalog is current as of 12/2021
Admission
In addition to meeting the Graduate College admission requirements, a student planning to pursue a graduate degree in the department should have a baccalaureate degree in a recognized field of biological, physical, agricultural, or engineering science. Background deficiencies may be removed with graduate credit courses designed for this purpose. Graduate Record Examination (GRE) scores are required of all applicants, and those whose native language is not English are required to submit the results of the TOEFL or IELTS as evidence of English proficiency. Minimum TOEFL and IELTS scores can be found at grad.illinois.edu/admissions/instructions/04c (http://www.grad.illinois.edu/admissions/instructions/04c/). Students can be admitted to start in fall, spring, or summer semesters except for the PSM concentration, which admits fall semester only. For information on the role faculty have in the admissions process go to fshn.illinois.edu/graduate/applying (http://www.fshn.illinois.edu/graduate/applying/).

Internship in Dietetics
The Department of Food Science and Human Nutrition offers a dietetic internship for master's and doctoral students specializing in human nutrition. Completion of the degree and the internship qualifies the student to take the Academy of Nutrition and Dietetics registration examination administered by the Commission on Dietetic Registration. For information on our dietetic internship program please contact Ms. Jessica Madson (jamadson@illinois.edu).

Online Program
A non-thesis Master of Science in Food Science program is offered via live, synchronous online sessions using distance education technology. The program ensures the same degree of excellence, and courses are instructed by the same faculty, as the on-campus non-thesis program. Courses are typically offered in the evening. For requirements and additional information, please contact Dr. Dawn Bohn at dbrehart@illinois.edu.

Graduate Teaching Experience
Teaching is neither a Graduate College nor a FSHN requirement. A limited number of teaching assistantships are available to FSHN graduate students. Students are selected to be Graduate Teaching Assistants by the Department Head in consultation with the course instructor.

Financial Aid
Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments; statutory waivers and tuition scholarships are accepted. Financial aid for non-PSM graduate students is available in the form of fellowships, teaching and research assistantships, and tuition and partial fee waivers. Qualified candidates are considered for financial support upon application. Additional information on financial aid for graduate students can be found at fshn.illinois.edu/graduate/financial-assistance (http://fshn.illinois.edu/graduate/financial-assistance/).

for the Master of Science in Food Science and Human Nutrition: Human Nutrition Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis Option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required Concentration Hours</td>
<td>26-27</td>
<td></td>
</tr>
<tr>
<td>FSHN 597 or NUTR 500</td>
<td>0 to 1</td>
<td></td>
</tr>
<tr>
<td>FSHN 599</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total Hours Thesis Option</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Non-Thesis Option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required Concentration Hours</td>
<td>26-27</td>
<td></td>
</tr>
<tr>
<td>FSHN 597 or NUTR 500</td>
<td>0 to 1</td>
<td></td>
</tr>
<tr>
<td>Total Hours Non-Thesis Option</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

Other Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other requirements may overlap</td>
<td></td>
</tr>
<tr>
<td>Minimum Hours Required Within The 8 Unit</td>
<td></td>
</tr>
<tr>
<td>Minimum 500-level Hours Required</td>
<td>12</td>
</tr>
</tbody>
</table>

For additional details and requirements refer to the department's graduate handbook (http://fshn.illinois.edu/graduate/student-handbook/) and the Graduate College Handbook (http://www.grad.illinois.edu/gradhandbook/).

This degree program can be completed with or without a thesis.

Undergraduate training must include statistics (ACE 261, CPSC 241, ECON 202, MATH 161, PSYC 235, SOC 280, or STAT 100), nutrition (equivalent to FSHN 220), and systemic physiology (equivalent to MCB 246). These undergraduate courses are not required for admission, but must be completed early in the graduate program and do not count toward concentration requirements. M.S. degrees require at least 12 hours of 500-level course work (including thesis research), and at least 8 of these 12 hours must be in the major field for graduation.

Additional courses may be required beyond the concentration minimum, per Advisory Committee recommendations, depending upon student/advisor learning objectives. A student whose prior education includes course work with identical or similar content to those specified above will be guided by their advisor and Advisory Committee regarding the selection of additional course work needed to meet the minimum hours of the HN concentration.

Students are encouraged to take new courses, rather than retake required courses they have already taken. If you have already taken a required course at the University of Illinois, it is highly recommended that you do not retake it. No petition is required. If you have taken a very similar course at another university, you are strongly encouraged to petition for acceptance of that course in lieu of the required course. Courses should be selected to expand and strengthen your knowledge in core and related disciplines, and/or to increase your research capabilities. Retaking a course does not meet that objective. For additional advice on this topic, contact your advisor and faculty advisory committee.

Students are required to enroll in another seminar course if they have a conflict that precludes their enrollment in FSHN 597 or NUTR 500. The seminar course may be offered by another department.

Course selection is flexible beyond this list if decided in consultation with advisor/advisory committee.

Information listed in this catalog is current as of 12/2021
### Concentration Requirements

**Requirements for Thesis Degree:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Hours for Concentration in Human Nutrition</strong></td>
<td>26-27</td>
<td></td>
</tr>
<tr>
<td><strong>Required Courses:</strong></td>
<td>17-19</td>
<td></td>
</tr>
<tr>
<td>MCB 450</td>
<td>Introductory Biochemistry (or higher)</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 420</td>
<td>Nutritional Aspects of Disease</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 426</td>
<td>Biochemical Nutrition I</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 427</td>
<td>Biochemical Nutrition II</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 465</td>
<td>Principles of Food Technology</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 593</td>
<td>Seminar in Foods and Nutrition</td>
<td>2</td>
</tr>
<tr>
<td><strong>Electives:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To meet 26-27 hours minimum, of which at least 3 (thesis MS) or 6 (non-thesis MS) hours need to be graded courses at the 500-level.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSHN 421</td>
<td>Pediatric Clinical Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 424</td>
<td>Biopsychology of Ingestive Behavior</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 428</td>
<td>Community Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 429</td>
<td>Nutrition Assessment &amp; Therapy</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 440</td>
<td>Applied Statistical Methods I</td>
<td>4</td>
</tr>
<tr>
<td>FSHN 480</td>
<td>Basic Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 510</td>
<td>Topics in Nutrition Research (Up to 4 hours count toward degree)</td>
<td>1 to 3</td>
</tr>
<tr>
<td>FSHN 520</td>
<td>Advanced Clinical Nutrition (up to 6 hours count toward degree)</td>
<td>2</td>
</tr>
<tr>
<td>FSHN 590</td>
<td>Dietetic Internship I (Restricted to dietetics internship students only)</td>
<td>5</td>
</tr>
<tr>
<td>FSHN 591</td>
<td>Dietetic Internship II (Restricted to dietetics internship students only)</td>
<td>5</td>
</tr>
<tr>
<td>FSHN 592</td>
<td>Graduate Internship Experience (Up to 2 hours count toward degree)</td>
<td>2</td>
</tr>
<tr>
<td>FSHN 598</td>
<td>Advanced Special Problems</td>
<td>1-8</td>
</tr>
<tr>
<td>or NUTR 593</td>
<td>Individual Topics in Nutrition</td>
<td></td>
</tr>
<tr>
<td>NUTR 511</td>
<td>Regulation of Metabolism</td>
<td>4</td>
</tr>
<tr>
<td>NUTR 550</td>
<td>Grantsmanship and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>NUTR 590</td>
<td>Disciplinary Seminar (Up to 2 hours count toward degree)</td>
<td>0 to 2</td>
</tr>
<tr>
<td>ANSC 421</td>
<td>Minerals and Vitamins</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 520</td>
<td>Protein and Energy Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 524</td>
<td>Nonruminant Nutrition Concepts</td>
<td>2</td>
</tr>
<tr>
<td><strong>FSHN/NUTR 511</strong></td>
<td>Regulation of Metabolism</td>
<td>4</td>
</tr>
<tr>
<td><strong>FSHN 520</strong></td>
<td>Advanced Clinical Nutrition (up to 6 hours count toward degree)</td>
<td>2</td>
</tr>
<tr>
<td><strong>ANSC 520</strong></td>
<td>Protein and Energy Nutrition</td>
<td>3</td>
</tr>
<tr>
<td><strong>FSHN 595</strong></td>
<td>Advanced Topics in Food Science and Human Nutrition (may take multiple modules)</td>
<td>1 to 4</td>
</tr>
<tr>
<td><strong>ANSC 524</strong></td>
<td>Nonruminant Nutrition Concepts</td>
<td>2</td>
</tr>
<tr>
<td><strong>Internship:</strong></td>
<td>8-10</td>
<td></td>
</tr>
<tr>
<td><strong>FSHN 590</strong></td>
<td>Dietetic Internship I (Restricted to dietetics internship students only)</td>
<td>5</td>
</tr>
<tr>
<td>or FSHN 591</td>
<td>Dietetic Internship II (Restricted to dietetics internship students only)</td>
<td>5</td>
</tr>
<tr>
<td><strong>FSHN 592</strong></td>
<td>Graduate Internship Experience (Up to 2 hours count toward degree)</td>
<td>0-2</td>
</tr>
<tr>
<td><strong>FSHN 598</strong></td>
<td>Advanced Special Problems</td>
<td>1-8</td>
</tr>
<tr>
<td>or NUTR 593</td>
<td>Individual Topics in Nutrition</td>
<td></td>
</tr>
</tbody>
</table>

**Requirements for Non-Thesis Degree:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Hours for Concentration in Human Nutrition</strong></td>
<td>26-27</td>
<td></td>
</tr>
<tr>
<td><strong>Required Courses:</strong></td>
<td>17-19</td>
<td></td>
</tr>
<tr>
<td>MCB 450</td>
<td>Introductory Biochemistry (or higher)</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 465</td>
<td>Principles of Food Technology</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 440</td>
<td>Applied Statistical Methods I</td>
<td>4</td>
</tr>
<tr>
<td>FSHN 521</td>
<td>Molecular Basis of Metabolic Syndrome and Weight Management</td>
<td>2</td>
</tr>
<tr>
<td>FSHN 522</td>
<td>Function and Metabolism of Essential Fatty Acids and Cholesterol</td>
<td>1</td>
</tr>
<tr>
<td>FSHN 527</td>
<td>Advanced Vitamins and Minerals: Regulations of Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>FSHN 593</td>
<td>Seminar in Foods and Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>FSHN 597</td>
<td>Graduate Seminar (required for every semester)</td>
<td>0-1</td>
</tr>
</tbody>
</table>

*or NUTR 500* Nutritional Sciences Seminar

**Electives:**

To meet 26-27 hours minimum, of which at least 3 (thesis MS) or 6 (non-thesis MS) hours need to be graded courses at the 500-level.

**FSHN 510** | Topics in Nutrition Research (may take multiple modules) | 1 to 3 |

**FSHN/NUTR 511** | Regulation of Metabolism | 4     |
| **FSHN 520** | Advanced Clinical Nutrition (up to 6 hours count toward degree) | 2     |
| **ANSC 520** | Protein and Energy Nutrition | 3     |
| **FSHN 595** | Advanced Topics in Food Science and Human Nutrition (may take multiple modules) | 1 to 4 |
| **ANSC 524** | Nonruminant Nutrition Concepts | 2     |
| **Internship:** | up to 8 hours (10 for dietectics) | 8-10   |
| **FSHN 590** | Dietetic Internship I (Restricted to dietetics internship students only) | 5     |
| or FSHN 591 | Dietetic Internship II (Restricted to dietetics internship students only) | 5     |
| **FSHN 592** | Graduate Internship Experience (Up to 2 hours count toward degree) | 0-2   |
| **FSHN 598** | Advanced Special Problems | 1-8   |
| or NUTR 593 | Individual Topics in Nutrition |       |

*1 Students enrolled in the Graduate Dietetic Internship may count up to 5 hours of FSHN 590 or FSHN 591 towards 500-level course requirements.*