**NUTRITIONAL SCIENCES, M.S.**

Modern nutrition is a multidisciplinary, integrative science, and the Interdepartmental Graduate Program in Nutritional Sciences (IGPNS) has been developed to meet this diversity in approach and objective. Thus, students can focus their training in one of three emphasis groups:

1. biochemical and molecular nutrition,
2. human nutrition, or
3. animal nutrition.

The degrees offered are the Master of Science and the Doctor of Philosophy in Nutritional Sciences.

It is the program's goal to provide graduate students interested in nutrition with an opportunity to obtain specialized training in a specific research area and also to obtain a general background in the science and practice of nutrition. The program is sufficiently flexible to allow students with a wide variety of undergraduate degrees to meet the background prerequisites. The program draws on the strengths of faculty in a number of the university's colleges and academic departments to enhance the instructional and research experience.

The training objectives of the IGPNS are to provide students with an understanding of basic nutritional principles as they apply to both humans and animals, to provide them with current knowledge in a specific area of emphasis, to make them aware of the integrative and multidisciplinary nature of nutrition research, and to direct them toward a successful career through the thesis and publications.

**Biochemical and molecular nutrition.** This emphasis group focuses on the application of biochemical and physiological approaches to the understanding of nutrient function and metabolism in systems ranging from the whole animal to the molecular level.

**Human nutrition.** This emphasis group takes a comprehensive view of human nutrition with emphasis on the maintenance and promotion of human health. It utilizes diverse research approaches to carry out studies on nutrient requirements, metabolism, and interactions. Research may involve physiological and biochemical studies, animal models and epidemiological, or educational or clinical interventions.

**Animal nutrition.** This emphasis group takes a comprehensive view of animal nutrition with a focus on expanding understanding of nutrient utilization. Research activities involve both the performance of domestic animals and general comparative nutrition across animal species. Studies may range from applied animal feeding trials to basic studies on nutrient metabolism or integrated whole-animal metabolism with an emphasis on quantification and regulation.

Thirty-three students from throughout the world are currently enrolled in the program. Twenty-four are doctoral candidates and nine are seeking master's degrees.

The graduate faculty have well-developed, competitively funded research programs and have been recognized for their activities by receiving national awards. They are active in national and international nutrition activities, and serve on editorial boards, as society officers, and as participants in numerous workshops and on advisory committees.

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**FUNDING**

Assistantships and fellowships are available to support students. Information about financial assistance may be obtained from the department office.

**REQUIREMENTS**

**MINIMUM DEGREE REQUIREMENTS AND SATISFACTORY PROGRESS**

To make progress toward a graduate degree, students must meet the Graduate School Minimum Degree Requirements and Satisfactory Progress (http://guide.wisc.edu/graduate/#policiesandrequirementstext) in addition to the requirements of the program.

**MASTER’S DEGREES**

M.S., with available tracks in biochemical and molecular, and human nutrition

**MINIMUM GRADUATE DEGREE CREDIT REQUIREMENT**

30 credits

**MINIMUM GRADUATE RESIDENCE CREDIT REQUIREMENT**

16 credits

**MINIMUM GRADUATE COURSEWORK (50%) REQUIREMENT**

At least 50% of credits applied toward the graduate degree credit requirement must be in graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide (http://my.wisc.edu/CourseGuideRedirect/BrowseByTitle).

**PRIOR COURSEWORK REQUIREMENTS: GRADUATE WORK FROM OTHER INSTITUTIONS**

With approval of the certification committee, students are allowed to count up to 14 credits of graduate coursework from other institutions. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

**PRIOR COURSEWORK REQUIREMENTS: UW–MADISON UNDERGRADUATE**

With approval of the certification committee, students may count up to 7 credits from a UW–Madison undergraduate degree, numbered 400 and above, toward the M.S. degree, provided that the course satisfies a requirement within the student’s core curriculum or IGPNS emphasis group. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

**PRIOR COURSEWORK REQUIREMENTS FROM: UW–MADISON UNIVERSITY SPECIAL**

With approval of the certification committee, students are allowed to count no more than 14 credits of coursework taken as a UW–Madison Special student, provided the course satisfies a requirement within the student’s core curriculum or IGPNS emphasis group and is numbered 300.
or above. Coursework earned five or more years prior to admission to a
master's degree is not allowed to satisfy requirements.

CREDITS PER TERM ALLOWED
12 credits: fall and spring semesters
2 credits: per eight-week summer session

PROGRAM-SPECIFIC COURSES REQUIRED

Biochemical and Molecular Track

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NUTR SCI/</td>
<td>Advanced Nutrition: Intermediary</td>
<td>3</td>
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<tr>
<td>BIOCHEM 619</td>
<td>Metabolism of Macronutrients</td>
<td></td>
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<tr>
<td>NUTR SCI/</td>
<td>Introduction to Nutritional</td>
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<td>POP HLTH 621</td>
<td>Epidemiology</td>
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<tr>
<td>NUTR SCI/</td>
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<tr>
<td>M&amp;ENVTOX 623</td>
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<tr>
<td>NUTR SCI 625</td>
<td>Advanced Nutrition: Obesity and Diabetes</td>
<td>1</td>
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<tr>
<td>NUTR SCI/</td>
<td>Experimental Diet Design</td>
<td>1</td>
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<tr>
<td>AN SCI 626</td>
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<tr>
<td>NUTR SCI 627</td>
<td>Advanced Nutrition: Vitamins</td>
<td>1</td>
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<tr>
<td>NUTR SCI 600</td>
<td>Introductory Seminar in Nutrition</td>
<td>1</td>
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<tr>
<td>NUTR SCI 931</td>
<td>Seminar-Nutrition</td>
<td>1</td>
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<tr>
<td>BIOCHEM/</td>
<td>Seminar-Nutrition and Metabolism</td>
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<tr>
<td>NUTR SCI 901</td>
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<tr>
<td>NUTR SCI 799</td>
<td>Practicum in Nutritional Sciences</td>
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Select 4 credits of BIOCHEM

Select a quantitative methods course

Human Nutrition Track

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<td>NUTR SCI 881</td>
<td>Seminar-Topics in Human and</td>
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<td></td>
<td>Clinical Nutrition</td>
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<td>NUTR SCI 799</td>
<td>Practicum in Nutritional Sciences</td>
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Select a research methods or data analysis course

OVERALL GRADUATE GPA REQUIREMENT

3.00 GPA required.

OTHER GRADE REQUIREMENTS

The Graduate School requires an average grade of B or better in all
coursework (300 or above, not including research credits) taken as a
graduate student unless conditions for probationary status require higher
grades. Grades of Incomplete are considered to be unsatisfactory if they
are not removed during the next enrolled semester.

PROBATION POLICY

The IGPNS requires a cumulative 3.0 GPA for all courses taken in the
UW Graduate School. Grades in research (Nutri Sci 991) are not included
in the calculation of the GPA. A student who does not maintain a 3.0
GPA can continue on probationary status for two semesters at the
recommendation of the major professor. If, at that time, the student does
not achieve a cumulative 3.0 GPA, they will be dropped from the program.

The Graduate School regularly reviews the record of any student who
earned grades of BC, C, D, F, or Incomplete in a graduate course (300
or above), or grade of U in research credits. This review could result
in academic probation with a hold on future enrollment or in being
suspended from the Graduate School.

ADVISOR / COMMITTEE

Every graduate student is required to have an advisor. To ensure that
students are making satisfactory progress toward a degree, the Graduate
School expects them to meet with their advisor on a regular basis.

An advisor generally serves as the thesis advisor. In many cases, an
advisor is assigned to incoming students. Students can be suspended
from the Graduate School if they do not have an advisor. An advisor is a
faculty member, or sometimes a committee, from the major department
responsible for providing advice regarding graduate studies.

A committee often accomplishes advising for the students in the early
stages of their studies.

ASSESSMENT AND EXAMINATIONS

Students must complete either a research-based thesis or a literature-
based report that passes scholarly review.

TIME CONSTRAINTS

Master's degree students who have been absent for five or more
consecutive years lose all credits that they have earned before their
absence. Individual programs may count the coursework students
completed prior to their absence for meeting program requirements; that
coursework may not count toward Graduate School credit requirements.

LANGUAGE REQUIREMENTS

No language requirements.

ADMISSIONS

Candidates for graduate study in nutritional sciences should have a
strong background in mathematics, chemistry, and biological and medical
sciences or social sciences. Specific prerequisites for the graduate
program include five to six semesters of chemistry, three semesters of
biological sciences including a course in animal physiology, mathematics
through trigonometry, and a course in calculus or statistics. Students
who have not completed all the requirements may be admitted, but
deficiencies should be made up during the first year of graduate study.

In general, all applicants must have a minimum grade point average
of at least 3.0 (on a 4.0 scale). Graduate Record Exam (GRE) scores
are required as well as three references and a personal statement.
Acceptance requires approval by the Department of Nutritional Sciences and the Graduate School.

**LEARNING OUTCOMES**

**KNOWLEDGE AND SKILLS**
- Articulates, critiques, and elaborates the theories, research methods, and approaches to inquiry in nutritional sciences. Specific knowledge areas of focus include intermediary metabolism, functions and metabolism of vitamins and minerals, nutrition-related diseases such as obesity and diabetes, and fundamental principles of epidemiology and nutrition policy.
- Identifies sources and assembles evidence pertaining to questions or challenges in nutritional sciences.
- Selects and/or utilizes the most appropriate methodologies and practices.
- Evaluates or synthesizes information pertaining to questions or challenges in nutritional sciences.
- Communicates clearly in ways appropriate to the field of nutritional science. This includes the composition of primary research and review articles. Demonstrates competent communication in the form of oral and poster presentations.

**PROFESSIONAL CONDUCT**
- Recognizes and applies principles of ethical and professional conduct.

**PEOPLE**

*Faculty:* Professors Eide (chair), Eisenstein, Groblewski, Lai, Ney, Ntambi, Smith, Sunde, Tanumihardjo; Associate Professors Olson, Yen; Assistant Professor Parks. Members of the Interdepartmental Graduate Program in Nutritional Sciences from outside the department: Adams, Anderson, Armentano, Attie, Binkley, Carey, Clayett-Dame, Combs, Cook, Crenshaw, Davis, Denu, Drezen, Engin, Goldman, Hayes, Hernandez, Kanarek, Karasov, Kemmitz, Kimple, Kling, Knoll, Kudsk, Lamming, Mares, Merrins, Pagliarini, Prolla, Reed, Robbins, Schaefer, Simon, White.