

# MASTER OF SCIENCE (M.S.) MAJOR IN HUMAN NUTRITION (THESIS OPTION)

## Major Program

The Graduate program in Human Nutrition promotes the study of human nutrition, food science, and biotechnology with emphasis on promoting health and preventing disease. Graduate instruction is based on a variety of learning strategies, including lecture, seminar-style discussion, participation in research, and practical laboratory work using state of the art equipment and techniques. Graduates achieve the technical skills, scientific knowledge, and local, national, and global perspectives to integrate the fields of nutrition, food science and food biotechnology to address human health concerns of the 21st century.

## Dietetic Internship Concurrent Enrollment

Students enrolled in the M.S. program who are interested in obtaining the registered dietitian (RD) credential are encouraged to apply for admission to the Texas State dietetic internship (DI) after they have completed at least one term. While up to nine hours of courses taken as part of the DI may count towards the M.S. degree, completion of both the M.S. and DI may require more course work than needed to complete the M.S. alone. Students interested in this dual option are required to meet with the graduate coordinator to determine courses required to complete both programs. It is important to note that admission to the M.S. does not guarantee acceptance into the Texas State DI.

## Application Requirements

The items listed below are required for admission consideration for applicable semesters of entry during the current academic year. Submission instructions, additional details, and changes to admission requirements for semesters other than the current academic year can be found on The Graduate College's website (<http://www.gradcollege.txstate.edu>). International students should review the International Admission Documents webpage (<http://mycatalog.txstate.edu/graduate/admission-documents/international>) for additional requirements.

- completed online application
- \$55 nonrefundable application fee
- or
- \$90 nonrefundable application fee for applications with international credentials
- baccalaureate degree (preferably in nutrition, food science or a related field) from a regionally accredited university
- official transcripts from **each institution** where course credit was granted
- minimum 3.0 GPA in the last 60 hours of undergraduate course work (plus any completed graduate courses)
- background course work in:
  - Introductory Biology
  - Introductory Nutrition
  - Microbiology
  - Anatomy and Physiology

- Introductory Chemistry (at least two semesters)
- Organic Chemistry (at least one course)
- Biochemistry
- Nutrition in the Lifespan
- GRE not required
- resume/CV
- statement of purpose describing professional aspirations and rationale for pursuing graduate study
- three letters of recommendation

## TOEFL or IELTS Scores

Non-native English speakers who do not qualify for an English proficiency waiver:

- official TOEFL iBT scores required with a 78 overall
- official IELTS (academic) scores required with a 6.5 overall and
  - minimum individual module scores of 6.0

This program does **not** offer admission if the scores above are not met.

## Degree Requirements

The Master of Science (M.S.) degree with a major in Human Nutrition requires 33 semester credit hours, including a thesis. Students who do not have the appropriate background course work may be required to complete a leveling course.

## Course Requirements

| Code                               | Title  | Hours |
|------------------------------------|--|-------|
| <b>Required Courses</b>            |  |       |
| FCS 5310                           | Research Methods in FCS  | 3     |
| FCS 5311                           | Statistics and Data Analysis for Family and Consumer Sciences                            | 3     |
| NUTR 5305                          | Seminar in Nutrition and Disease   | 3     |
| NUTR 5306                          | Seminar in Nutrition in the Lifespan   | 3     |
| NUTR 5364                          | The Science of Nutrition and Exercise  | 3     |
| NUTR 5366                          | Nutrient Metabolism I  | 3     |
| NUTR 5367                          | Nutrient Metabolism II   | 3     |
| NUTR 5372                          | Advances in Nutrition Policy and Ethics  | 3     |
| <b>Elective</b>                    |  |       |
| Choose 3 hours from the following: |  | 3     |
| AG 5370                            | Special Problems in Technical Agriculture  |       |
| BIO 5426                           | Immunology   |       |
| ESS 5317                           | Exercise Physiology  |       |
| H ED 5315                          | Application of Quantitative Data Analysis in Health and Wellness Promotion (Research II) |       |
| H ED 5320                          | Foundation of Public Health  |       |
| NUTR 5302F                         | Nutritional Supplements  |       |
| NUTR 5302G                         | Pediatric Obesity  |       |
| NUTR 5302J                         |  |       |
| NUTR 5355                          | Advanced Independent Study in Nutrition  |       |
| NUTR 5360                          | Practicum for Dietetic Internship  |       |
| NUTR 5361                          | Advanced Food Systems Administration   |       |
| NUTR 5362                          | Advanced Medical Nutrition Therapy   |       |
| NUTR 5363                          | Advanced Community Nutrition   |       |
| NUTR 5371                          | Externship in Human Nutrition  |       |

|   |                                 |    |
|---|---------------------------------|----|
| NUTR 5374                                       | Advanced Nutrition and Genetics |    |
| NUTR 5375                                       | Advances in Life Span Nutrition |    |
| SPAN 5322                                       | Spanish for the Professions     |    |
| <b>Thesis</b>                                   |                                 |    |
| NUTR 5399A                                      | Thesis                          | 3  |
| Choose a minimum of 3 hours from the following: |                                 | 3  |
| NUTR 5199B                                      | Thesis                          |    |
| NUTR 5299B                                      | Thesis                          |    |
| NUTR 5399B                                      | Thesis                          |    |
| NUTR 5599B                                      | Thesis                          |    |
| NUTR 5999B                                      | Thesis                          |    |
| Total Hours                                     |                                 | 33 |

## Comprehensive Examination Requirements

All candidates for graduate degrees must pass one or more comprehensive examinations.

If a student elects to follow the thesis option for the degree, a committee to direct the written thesis will be established. The thesis must demonstrate the student's capability for research and independent thought. Preparation of the thesis must be in conformity with the *Graduate College Guide to Preparing and Submitting a Thesis or Dissertation*.

## Thesis Proposal ([http://www.gradcollege.txstate.edu/docs/Thesis\\_Diss\\_Guide.pdf](http://www.gradcollege.txstate.edu/docs/Thesis_Diss_Guide.pdf))

The student must submit an official Thesis Proposal Form (<http://www.gradcollege.txstate.edu/forms.html>) and proposal to his or her thesis committee. Thesis proposals vary by department and discipline. Please see your department for proposal guidelines and requirements. After signing the form and obtaining committee members' signatures, the graduate advisor's signature if required by the program and the department chair's signature, the student must submit the Thesis Proposal Form with one copy of the proposal attached to the dean of The Graduate College for approval before proceeding with research on the thesis. If the thesis research involves human subjects, the student must obtain exemption or approval from the Texas State Institutional Review Board prior to submitting the proposal form to The Graduate College. The IRB approval letter should be included with the proposal form. If the thesis research involves vertebrate animals, the proposal form must include the Texas State IACUC approval code. It is recommended that the thesis proposal form be submitted to the dean of The Graduate College by the end of the student's enrollment in 5399A. Failure to submit the thesis proposal in a timely fashion may result in delayed graduation.

## Thesis Committee

The thesis committee must be composed of a minimum of three approved graduate faculty members.

## Thesis Enrollment and Credit

The completion of a minimum of six hours of thesis enrollment is required. For a student's initial thesis course enrollment, the student will need to register for thesis course number 5399A. After that, the student will enroll in thesis B courses, in each subsequent semester until the

thesis is defended with the department and approved by The Graduate College. Preliminary discussions regarding the selection of a topic and assignment to a research supervisor will not require enrollment for the thesis course.

Students must be enrolled in thesis credits if they are receiving supervision and/or are using university resources related to their thesis work. The number of thesis credit hours students enroll in must reflect the amount of work being done on the thesis that semester. It is the responsibility of the committee chair to ensure that students are making adequate progress toward their degree throughout the thesis process. Failure to register for the thesis course during a term in which supervision is received may result in postponement of graduation. After initial enrollment in 5399A, the student will continue to enroll in a thesis B course as long as it takes to complete the thesis. Thesis projects are by definition original and individualized projects. As such, depending on the topic, methodology, and other factors, some projects may take longer than others to complete. If the thesis requires work beyond the minimum number of thesis credits needed for the degree, the student may enroll in additional thesis credits at the committee chair's discretion. In the rare case when a student has not previously enrolled in thesis and plans to work on and complete the thesis in one term, the student will enroll in both 5399A and 5399B.

The only grades assigned for thesis courses are PR (progress), CR (credit), W (withdrew), and F (failing). If acceptable progress is not being made in a thesis course, the instructor may issue a grade of F. If the student is making acceptable progress, a grade of PR is assigned until the thesis is completed. The minimum number of hours of thesis credit ("CR") will be awarded only after the thesis has been both approved by The Graduate College and released to Alkek Library.

A student who has selected the thesis option must be registered for the thesis course during the term or Summer I (during the summer, the thesis course runs ten weeks for both sessions) in which the degree will be conferred.

## Thesis Deadlines and Approval Process

Thesis deadlines are posted on The Graduate College (<http://www.gradcollege.txstate.edu>) website under "Current Students." The completed thesis must be submitted to the chair of the thesis committee on or before the deadlines listed on The Graduate College website.

The following must be submitted to The Graduate College by the thesis deadline listed on The Graduate College website:

1. The Thesis Submission Approval Form bearing original (wet) and/or electronic signatures of the student and all committee members.
2. One (1) PDF of the thesis in final form, approved by all committee members, uploaded in the online Vireo submission system.

After the dean of The Graduate College approves the thesis, Alkek Library will harvest the document from the Vireo submission system for publishing in the Digital Collections database (according to the student's embargo selection). **NOTE: MFA Creative Writing theses will have a permanent embargo and will never be published to Digital Collections.**

While original (wet) signatures are preferred, there may be situations as determined by the chair of the committee in which obtaining original signatures is inefficient or has the potential to delay the student's progress. In those situations, the following methods of signing are acceptable:

- signing and faxing the form
- signing, scanning, and emailing the form
- notifying the department in an email from their university's or institution's email account that the committee chair can sign the form on their behalf
- electronically signing the form using the university's licensed signature platform.

If this process results in more than one document with signatures, all documents need to be submitted to The Graduate College together.

No copies are required to be submitted to Alkek Library. However, the library will bind copies submitted that the student wants bound for personal use. Personal copies are not required to be printed on archival quality paper. The student will take the personal copies to Alkek Library and pay the binding fee for personal copies.

Master's level courses in Human Nutrition: NUTR

## Courses Offered

### Nutrition and Foods (NUTR)

#### NUTR 5101. Graduate Assistant Development.

This course is required as a condition of employment for graduate teaching and instructional assistants. This course provides regular in-service and planned periodic evaluations of instructional responsibilities. This course does not earn graduate degree credit.

**1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.**

**Course Attribute(s):** Graduate Assistantship|Exclude from Graduate GPA

**Grade Mode:** Leveling/Assistantships

#### NUTR 5199B. Thesis.

Continuing thesis enrollment. Focus is on data collection, analysis and writing of the thesis. The student continues to enroll in this course until the thesis is defended.

**1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Credit/No Credit

#### NUTR 5299B. Thesis.

Continuing thesis enrollment. Focus is on data collection, analysis and writing of the thesis. The student continues to enroll in this course until the thesis is defended.

**2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Credit/No Credit

#### NUTR 5300. Foundation Studies in Human Nutrition.

This course is designed for students who do not have a sufficient background in the foundations of nutrition and food science to be successful in graduate level courses. This course does not earn graduate degree credit. Course is repeatable. Prerequisite: Instructor approval.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing|Exclude from Graduate GPA|Leveling

**Grade Mode:** Leveling/Assistantships

#### NUTR 5302F. Nutritional Supplements.

An advanced study of the efficacy of dietary supplements. Both nutrient and non-nutrient supplement components will be discussed. Clinical trials, epidemiological data and molecular mechanisms of action of dietary supplements will be compared to manufacturer's claimed action. Prerequisite: Instructor approval.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing|Topics

**Grade Mode:** Standard Letter

#### NUTR 5302G. Pediatric Obesity.

An advanced study of pediatric obesity, including causes, economic and health related consequences, evidence-based treatment and prevention strategies. Prerequisite: Instructor approval.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing|Topics

**Grade Mode:** Standard Letter

#### NUTR 5305. Seminar in Nutrition and Disease.

An advanced study of a selected topic in nutrition concerning nutrients and functional foods and their role in disease prevention or treatment. Class topics will enter on clinical trials, epidemiological data and molecular mechanisms of action concerning the ability of nutrients to prevent or treat disease. Repeatable for credit when topic varies.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

#### NUTR 5306. Seminar in Nutrition in the Lifespan.

An advanced study of a selected topic in nutrition and the lifespan from a multidisciplinary perspective, including review of scientific literature in nutrition, physiology, biochemistry, sociology, exercise sports science, epidemiology, endocrinology and genetics. Repeatable for credit when topic varies.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

#### NUTR 5320. Diet Therapy and Pathophysiology.

This course will study the physiological and biochemical abnormalities of certain disease states as they relate to the human body's systems placing emphasis on diet modification as a therapeutic measure.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

#### NUTR 5350. Research Methods in Nutrition and Food Science.

Evaluation of research concepts, methods, and strategies used in nutrition and food science research. Topics include the nature of scientific research, sampling, measurement, data collection, types of research methodology, use of data analysis and management software, and evaluation of research reports.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

#### NUTR 5355. Advanced Independent Study in Nutrition.

Individual work with specific guidance from graduate nutrition faculty. Work may include participation in research, professional practice, and/or critical review of the scientific literature. Course may be repeated once for credit when topics vary.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5360. Practicum for Dietetic Internship.**

Students observe and engage in the practice of dietetics under the supervision of practitioners in facilities for health care, public health, and food systems. Repeated twice to meet requirements to complete the dietetic internship program. Prerequisite: Instructor approval.

**3 Credit Hours. 0 Lecture Contact Hours. 6 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Credit/No Credit

**NUTR 5361. Advanced Food Systems Administration.**

Techniques and procedures for management, service, and marketing of meals in commercial and noncommercial food service facilities.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5362. Advanced Medical Nutrition Therapy.**

Advanced study of medical nutrition therapy with emphasis on application of principles and techniques of nutritional assessment emphasizing current clinical nutrition practices. Current scientific literature will be used extensively to discuss most recent advances in the area of medical nutrition therapy.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5363. Advanced Community Nutrition.**

Assessment of the nutritional needs of the community and of programs that serve the needs. Experiences include survey techniques, nutritional education, and management of programs to meet specific nutritional needs through community agencies.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5364. The Science of Nutrition and Exercise.**

An advanced course focusing on the physiological and biochemical impact of nutrient intake on physical performance, health and fitness. Special emphasis will be placed on the investigation of a variety of dietary supplements, including purported ergogenic aids. The course requires significant reading and interpreting of the scientific literature.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5366. Nutrient Metabolism I.**

An advanced study of the biochemical and physiological foundations of nutrition and metabolism and its relevance to health and wellness. Scientific literature pertaining to biochemical structure, metabolism and physiological regulation of macronutrients and water-soluble vitamins.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5367. Nutrient Metabolism II.**

An advanced study of the biochemical and physiological foundations of nutrition with emphasis on fat-soluble vitamins and minerals. Current scientific information pertaining to structure, metabolism and physiological regulation of these micronutrients.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5371. Externship in Human Nutrition.**

Structured practical experience in human nutrition, food science, food biotechnology. Supervision provided by a member of the graduate faculty and a designated individual at the work site. Requires a minimum of 150 hours of supervised experience. Prerequisite: Instructor approval.

**3 Credit Hours. 0 Lecture Contact Hours. 40 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Standard Letter

**NUTR 5372. Advances in Nutrition Policy and Ethics.**

This course considers the disparate influences on the US food supply, on federal and state nutrition and food-related policies, and ultimately, on individual dietary intake. Potential influences, including current state and federal policies, industry, interest groups, and the media, driven by economics and ethical consideration, will be addressed.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5374. Advanced Nutrition and Genetics.**

This course will examine the specific processes in intermediary nutrient metabolism and their genetic regulation. The effects of nutrients on gene expression, cell signaling, cell physiology, and disease processes will also be explored.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5375. Advances in Life Span Nutrition.**

An advanced study of the nutritional requirements throughout the life span involving a multidisciplinary approach including, biochemistry, endocrinology and genetics, and perspectives of human psychological and social development. Prerequisite: Instructor approval.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**NUTR 5399A. Thesis.**

Initial thesis enrollment. Focus is on identification of thesis topic, review of literature, research design and preparation of thesis proposal. No thesis credit is awarded until completion of NUTR 5399B.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Credit/No Credit

**NUTR 5399B. Thesis.**

Continuing thesis enrollment. Focus is on data collection, analysis and writing of the thesis. The student continues to enroll in this course until the thesis is defended.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Credit/No Credit

**NUTR 5599B. Thesis.**

Continuing thesis enrollment. Focus is on data collection, analysis and writing of the thesis. The student continues to enroll in this course until the thesis is defended.

**5 Credit Hours. 5 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Credit/No Credit

**NUTR 5999B. Thesis.**

Continuing thesis enrollment. Focus is on data collection, analysis and writing of the thesis. The student continues to enroll in this course until the thesis is defended.

**9 Credit Hours. 9 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Exclude from 3-peat Processing

**Grade Mode:** Credit/No Credit