

**The
Graduate Program
MS in Human Nutrition**

**Department of Human Sciences
Human Nutrition**

Graduate Handbook

**The Ohio State University
Columbus, OH**

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The Graduate Program in Human Nutrition

GRADUATE PROGRAM MANUAL: A GUIDE TO SUCCESS

I. INTRODUCTION

New graduate students are advised to read this manual in its entirety and to consult with their adviser or the Chair of the Human Nutrition Graduate Studies Committee if any of the requirements described are unclear.

This handbook has been prepared to provide information about the policies, procedures, and degree requirements of the Graduate Program in Human Nutrition (HN) at OSU. The information provided here is specific for graduate students in the Program in Human Nutrition and adds to that already covered in the Graduate School Handbook, which is available on the Graduate School website. The standards for admission to this graduate program are listed in Appendix A.

The described course work, research requirements and expectations represent the **minimum** that the faculty has agreed upon. You may be required by your Adviser or Advisory Committee to perform course work over and above the minimum because of your specific research plans and career goals or because you lack appropriate background in some areas. Such issues are matters for discussion between you, your adviser and your Advisory Committee.

Students should also be familiar with the university's regulations and policies for graduate students as they are described in the Graduate School Handbook. In order to benefit from the information in this manual, you must be prepared to take responsibility for your progress in the program. Do not assume that your adviser or other faculty members will automatically remind you of every step that you need to take. We urge you to meet with your adviser regularly to review your progress. We welcome you to the Program in Human Nutrition, and wish you the very best of success in your graduate career.

II. THE PROGRAM'S MISSION IN GRADUATE EDUCATION

The Program in Human Nutrition offers a graduate program leading to the Master of Science (M.S.) degree in Human Nutrition. The faculty recognizes that "nutrition science" is a broad discipline. Sociological, behavioral, policy, public health, medical, agricultural and biologic approaches represent just a few of the nutritionally relevant questions. As a result, people who choose to study nutrition are faced with several challenges. First, they must understand the basic chemistry of nutrients, their metabolism and their biological functions. Second, students of nutrition must also understand how the biology of nutrition is applied in the practical arena. Finally, it is important to acquire expertise in one or more of the support disciplines that nutrition relies upon (e.g., biochemistry, economics, public health, food science, education, etc).

The M.S. Program in Human Nutrition is grounded in the science of nutrition. We want all of our students to understand the metabolism and function of nutrients, as well as the scientific basis for the relationships between diet and disease. We also want our students to appreciate the ways in which nutrition science is utilized to improve the health of people and how research is utilized to set public policy. We aim to be flexible to help each student develop into the type of "nutritionist" that he or she wishes to become.

III. ROLES AND REPONSIBILITIES

1. You

While the graduate faculty in the Program in Human Nutrition is committed to providing a quality education for each of its students, it is essential that each student take responsibility for his or her own education. This means that you should read and adhere to the policies, requirements, and timetables described within this manual. In addition, should any problems arise that might affect your educational experience while at Ohio State University; you should inform your adviser and the Chair of the Human Nutrition Graduate Studies Committee so that you may receive proper guidance to help you through such difficulties. The Graduate Compact in **Appendix B** further outlines the roles of a graduate student in his or her education. Your role as a citizen of the Program in Human Nutrition is found in **Appendix C**.

2. Your Adviser

The primary role of the faculty adviser is to guide the student through the degree process. An adviser will counsel a student on the preparation of his or her Plan of Study (i.e., courses to be taken), research directions, and career goals. During the writing of the proposal and the thesis or project summary, the adviser is also responsible for reading each draft and for teaching the student effective written communication skills. Students should meet with their advisers as often as necessary, but no less than monthly. While many faculty members have an “open-door” policy with regards to graduate students, advisers are not obligated to see students without an appointment. Thus, students should respect the other obligations of the faculty and schedule meetings whenever possible. Optimally, the relationship between an adviser and student should be collegial and not antagonistic. The basic code of conduct for graduate faculty is provided in the Graduate Compact in **Appendix B**.

The Graduate Faculty acknowledges that the proper adviser-student relationship and matching of scholarly interests is important for the student’s success. Students should feel free to change advisers if it appears that another faculty member would better meet their needs. Advisers may also recommend such a change. A student who wishes to change to another adviser will write a memo to the Chair of the Human Nutrition Graduate Studies Committee requesting such a change and obtain the signatures of the current adviser and the adviser with whom the student would like to complete his/her program. If a student wishes to change the adviser, but an agreement cannot be reached among the student, current adviser and proposed new adviser, the matter will be referred to the Human Nutrition Graduate Studies Committee for a decision. It is important that the student recognize that a change in adviser may affect the length of time necessary to complete the thesis or research project and the availability and type of financial support.

3. The Advisory Committee

The Advisory Committee is a group of faculty whose primary function is to assist a student in the development of his or her Plan of Study and to evaluate the performance of the student’s scholarly efforts. This Advisory Committee approves the Plan of Study for students. After a student has received approval for the Plan of Study, the committee will focus its efforts on the student’s thesis or research project. Like the adviser, members of the Advisory Committee will be available to advise the student on issues related to the research directions and career goals.

There are three members of the Advisory Committee for the MS degree including the advisor. At least two advisory committee members will be chosen from the program graduate faculty. One member on the committee may be a member of the Graduate Faculty who is not affiliated with the program provided he or she brings a unique expertise to the committee that would be absent otherwise. Each member of the committee should be selected based upon his or her expertise. A minimum of two members of the Advisory Committee must have Category M or P status at the graduate school. Members should be contacted to help refine ideas and plans developed by the student and his or her adviser or for specific help with technical difficulties related to thesis or project research. Within the first and second semesters of study, each student should identify and meet with his or her adviser to determine which faculty members are most appropriate to serve on an Advisory Committee. The student should schedule an appointment with this faculty to request their participation on this committee. Students should meet with individual members of their committee as often as they feel necessary. At the end of the second semester, the full committee should be assembled to review the progress of the student. Two weeks prior to this committee meeting, students should provide a written progress report to the Advisory Committee. The report should summarize the work conducted since the last meeting, problems that are impeding progress, a plan for work to be conducted in the next six months, and a timetable for completion of degree requirements.

4. The Chair of the Human Nutrition Graduate Studies Committee

The Chair of the Human Nutrition Graduate Studies Committee is the faculty member who oversees and organizes the program's graduate program. His or her roles include providing leadership for faculty activities related to student recruitment, admissions, desk assignments to incoming students, orientation for new students, and counseling enrolled students on general issues related to courses and career goals. If a student is having difficulties with his or her adviser or committee he or she may discuss this matter in full confidentiality with the Chair of the Human Nutrition Graduate Studies Committee.

5. The Human Nutrition Graduate Studies Committee

The Human Nutrition Graduate Studies Committee typically consists of the Chair and two to four members of the Graduate Faculty. This committee is responsible for the formation and implementation of policies, procedures, and curriculum changes of the Human Nutrition graduate program in accordance with the policies established by the Graduate School and recruitment of students to the program. The Human Nutrition Graduate Studies Committee also reviews student petitions for transfer credits and waiving specific course requirements. The Human Nutrition Graduate Studies Committee evaluates applications to the M.S. program in Human Nutrition and makes recommendations regarding admission. This committee is responsible for documenting competency in the nutritional sciences of all newly admitted students and will monitor remediation steps should a student be admitted without competency. The Human Nutrition Graduate Studies Committee has oversight responsibility to ensure that graduate students are evaluated yearly and that approved plans of study and other indicators of academic progress are documented. The Graduate Studies Committee will remind advisers that this documentation is necessary for the evaluation of applications for financial aid or fellowships. The Human Nutrition Graduate Studies Committee also serves as the review panel for the selection of students for awards, including Fellowships, Scholarships, the Outstanding Graduate Teaching Assistant Award and The Outstanding Graduate Research Award. Finally, the Human Nutrition Graduate Studies Committee consults with the Program Leader on the

awarding of stipends for the financial support of graduate students and assignment of the teaching and administrative responsibilities associated with such support.

6. The Human Nutrition Graduate Student Association

This association is open to all graduate students in Human Nutrition. There are four elected officers: President, two Vice Presidents and Treasurer. The Chair of the Human Nutrition Graduate Studies Committee is an ex officio member. The purpose of the association is to provide a vehicle for graduate students (and faculty when appropriate) to regularly discuss issues that may enhance or inhibit their well-being and progress, and to provide a framework for fellowship and service among graduate students. Students will select a member of the graduate faculty as an advisor.

7. The Graduate Faculty and their Areas of Research. Category (M) or (P) status for faculty is shown.

(P) Martha Belury, Ph.D., R.D., Carol S. Kennedy Professor of Nutrition

Mechanisms of bioactive lipids in regulating insulin sensitivity in liver, adipose and muscle; Role of energy balance in cancer prevention.

(P) Amanda Bird, Ph.D., Assistant Professor

Regulation of gene expression by zinc; nutrient-dependent regulation of non-protein coding RNA levels.

(P) Josh Bomser, Ph.D., Associate Professor

Dietary bioactives and chronic disease.

(P) Richard Bruno, Ph.D., R.D., Associate Professor

Bioavailability of antioxidants and bioactive food components; Mechanisms of green tea, vitamin E, and functional foods in regulating obesity-induced nonalcoholic steatohepatitis (NASH) and vascular endothelial function.

(M) Paul S. Casamassimo, D.D.S., M.S., Professor

Role of nutrition and foods in dental diseases.

(P) Robert A. DiSilvestro, Ph.D., Professor

Nutritional biochemistry and clinic nutrition of zinc and copper, antioxidant actions of nutrients and phytonutrients.

(P) Helen Everts, Ph.D., Assistant Professor

Role of Vitamin A metabolism and function in the hair follicle, including their stem cells, and diseases of skin and hair such as skin cancer and hair loss.

(P) Carolyn Gunther, Ph.D., Assistant Professor

Developing and implementing community-based, family nutrition interventions to improve the food choices and eating behaviors of young children; developing novel approaches to improve overall calcium intake in at-risk populations.

(P) Earl Harrison, Ph.D., Dean's Distinguished Professor of Nutrition

Proteins and enzymes involved in the transport, metabolism, and function of dietary retinoids (vitamin A) and carotenoids.

(M) Irene Hatsu, Ph.D., Assistant Professor

Food insecurity and nutritional health in vulnerable populations; nutrition intervention for chronic disease prevention and management; nutritional and health benefits from food assistance programs.

(M) Sanja Ilic, Ph.D., Assistant Professor

Microbial safety of foods with a special emphasis on food safety of fresh fruits and vegetables. Transmission and dissemination routes and intervention to prevent or reduce risks of contamination of fresh produce and other foods with human pathogens within the foods system approach.

(M) Julie Kennel, Ph.D., R.D., L.D., Program Director, Dietetic Internship and OSU Extension

Promotion of healthy eating through theory-based behavior change strategies, fruit and vegetable intake, qualitative research for intervention design, instrument validation

(P) Carla Miller, Ph.D., R.D., Professor

Behavioral nutrition for health promotion and disease prevention; nutrition education; diabetes self-management.

(M) Tonya Orchard, Ph.D., R.D., Assistant Professor; Program Director, Didactic Program in Dietetics

Dietary prevention and treatment of chronic inflammatory conditions with a focus on fatty acids and musculoskeletal diseases; prevention of chemotherapy-induced side effects with nutritional interventions.

(P) Ouliana Ziouzenkova, Ph.D., Associate Professor

Nutrient-dependent nuclear receptor regulation for prevention and treatment of obesity and B cell-related immune disorders in men and women.
Development of nanotechnology-based methods for obesity treatment and prevention

IV. GRADUATE POLICIES AND PROCEDURES

1. The Curriculum

The Master of Science in Human Nutrition degree requires a minimum of 30 graduate credit hours including thesis research hours not exceeding 6 credits of the 30 credit hours and a 1-2 hour oral examination and a departmental presentation of the thesis or project research. A 3-member advisory committee (1 advisor and 2 other graduate faculty) will guide the MS graduate study program for individual students. When courses are cross-listed (e.g. HN7762 and AS7762), students should opt for the Human Nutrition (HN) course.

List of Semester Courses (department, title, credit hours) and categories of courses that constitute the requirements of the program:

<u>Required Core Courses</u>	<u>Credit Hours</u>
HUMN NTR 7761 Macronutrients and Metabolism	4
HUMN NTR 7762 Vitamin and Mineral Metabolism	4
HUMN NTR 7789 Nutrition Research Design	1
HUMN NTR 7898 Research Seminar	1
HUMN NTR 7899 Oral Research Communication	1
HUMN NTR 7999 Research: Thesis	6
 <u>Supportive Electives (3 credits required)</u>	
STAT 5301 Data analysis I OR	4
PUB HEALTH 6210 Design and Analysis of Studies in Health Science OR	3
MOL GEN 5650 Analysis and Interpretation of Biological Data	3
 <u>Suggested Electives (10 credits required)*</u>	
HUMN NTR 5705 Nutrition and Exercise	2
HUMN NTR 5611 Medical Nutrition Therapy 1	3
HUMN NTR 5612 Medical Nutrition therapy 2	3
HUMN NTR 8801 Macronutrients-Lipids and Energy Balance	3
HUMN NTR 8802 Advanced Micronutrient Metabolism	3
HUMN NTR 7804 Advanced Community and International Nutrition	3
HUMN NTR 7806 Advanced Nutrition Education	3
HUMN NTR 8832 Women's Health	3
HUMN NTR 8833 Diet and Cancer	3
EDUPAES 7741 Multicultural Issues in Counseling	4
ANTHROP 5600 Medical Anthropology: Biosocial Aspects of Health	3
EDUPAES 7726 Changing Physical Activity Behavior	3
PUB HLTH 8411 Epidemiology of Obesity	3
PUB HLTH 7522 Program Planning and Implementation	3
PUB HLTH 6510 Preventing Disease & Promoting Health Through Behav Sci	3
VETBIOS 6640 Fundamentals of oncology	4
NURSING 7450 Pathophysiology of Altered Disease States	5
MOLGEN 5701 DNA Transactions and Gene Regulation	4
MOLGEN 5705 Advances in Cell Biology	2

* A suggested elective may be replaced with a more relevant class if the new elective will lead to graduate credit upon completion. Please see section 4.1 of the Graduate School Handbook for course numbers that can be taken to receive graduate credit. Alternative electives must be approved by the student's advisory committee prior to taking the course.

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 College of Education and Human Ecology
 ADVISING SHEET

Year 1 Course	Autumn Name	Credit	Year 1 Course	Spring Name	Credit
HUMN NTR 7761	Macronutrients and Metabolism	4	HUMN NTR 7762	Vitamin and Mineral Metabolism	4
HUMN NTR 7789	Nutrition Research Design	1	HUMN NTR 7899	Oral research Communication	1
HUMN NTR 8888	Research Seminar	1	HUMN NTR 7999	Research: Thesis	1
			Suggested Elective	See list below	2
		Total	6		
				Total	8
Year 2	Autumn		Year 2	Spring	
Suggested Elective	See list below	3	Suggested Electives	See list below	5
Supportive Elective	See list below	3	HUMN NTR 7999	Research: Thesis	3
HUMN NTR 7999	Research: Thesis	2			
		Total	8		
				Total	8

Supportive Electives (3 credits required)
 See list above for electives

Suggested Electives (10 credits required)
 See list above for electives

2. Transferring Courses for Graduate Degree Requirements

Up to six (6) graduate credits earned within the last 5 years at another university or as a non-degree graduate student at this University may be transferred to this program provided the earned grade was B or better. If you wish to substitute such credits for some of the M.S. requirements, you must first have these courses approved by your Advisory Committee. Following this approval, you should make a written request to the Chair of the Human Nutrition Graduate Studies Committee. Your adviser must co-sign the request. You should include the following:

- copies of course syllabi.
- a list of required textbooks and readings.
- any other materials that describe the content of the courses.
- a copy of the official transcript showing performance with a minimum grade of B.

The materials you provide will be examined by the Human Nutrition Graduate Studies Committee to decide whether the courses are acceptable for substitution. If approved, the Chair of the Human Nutrition Graduate Studies Committee will initiate the request for transfer of graduate credit with the Graduate School. If not approved, you and your Adviser will be informed in writing.

3. Grading Policy

Most content courses that you will take are graded on a scale of A+, A, A-, B+, B, B-, C+, C, C-, D and E. The grade of “A” is awarded for “superior” performance and the grade of “B” is awarded for “very good” or “good” performance. A grade of “C” indicates that one’s performance has been weak and marginal relative to the expectation of graduate students. An overall average of “B” is required (equivalent to a 3.0 cumulative point-hour ratio) for completion of a graduate degree program at OSU. All grades except S and U will be counted in all courses that are attempted and carry graduate degree credit. Because grades of “C” are discouraged, the Human Nutrition Graduate Studies Committee in consultation with the student’s Advisory Committee will review the progress of students in any of the degree programs who receive a “C” or lower in 2 or more classes. Students will receive a written notice that failure to improve academic performance will result in dismissal from the program. Students who receive a “C” or lower in three or more classes will be automatically terminated from the program. Students should refer to the Graduate School Handbook to learn about the University policy regarding withdrawing from courses and the grade of incomplete.

4. Academic Standard

Students must be in good academic standing (i.e., maintain a graduate cumulative point-hour ratio of 3.0 or higher for all graduate credit courses and demonstrate reasonable progress as agreed upon by the advisory committee towards completion of graduate program requirements) to remain in the Human Nutrition program and to remain eligible for financial support. Failure to maintain the mean of 3.0 results in a student being placed on probation by the Graduate School. The Graduate School will dismiss a student who is on probation and who does not raise their cumulative mean to a minimum of 3.0 within two semesters. A student is not eligible for the defense of the thesis if the cumulative index is below 3.0.

5. Policy on General Nutrition Competency

Students must demonstrate that they have mastered the information that is normally taught in an introductory human nutrition course to remain enrolled in the M.S. Program. This can be accomplished in one of two ways. First, the student may have successfully completed an introductory human nutrition course prior to enrolling in the M.S. Program in Human Nutrition, at OSU. Second, the student may demonstrate mastery of the knowledge by achieving a grade of “B” or better on all the tests and assignments that are normally taken in the “Majors” section of the Human Nutrition course at OSU (HN 2310). The student may take these exams as part of the course or may take the tests following a period of self-study. Regardless, the student is required to meet the general nutrition requirement by the end of the first semester following enrollment. A student who fails to demonstrate mastery of general nutrition knowledge will be given one additional attempt to demonstrate his or her ability. Following two-failed attempts, the student will be terminated from the graduate program in Human Nutrition. The Human

Nutrition Graduate Studies Committee is responsible for ensuring that this policy is implemented and successfully completed in the first semester of enrollment.

Students who have no previous background in nutrition and who have been awarded teaching associateships must meet an additional standard. In this case the process of demonstrating competency must be accelerated. These students must take each of the tests, and complete each of the assignments, at least two weeks prior to the scheduled exam date or assignment due date that has been set for students enrolled in HN 2310. This will help ensure that the student is capable of properly assisting undergraduate students.

6. The Plan of Study

The Plan of Study is a roadmap used by the student to guide his or her progress through the coursework necessary for the M.S. degree. The Plan of Study must be outlined by the student and the adviser and approved by the Advisory Committee by the end of the second semester after initiating the program. The plan must include the following:

- the courses that the student will take to complete the minimum degree requirements
- all specific core, seminar, and research requirements.
- a timetable as to when these courses will be taken.

A record of all graduate work the student has taken must accompany the proposed Plan of Study. (Forms available for download on the department website) The Advisory Committee will evaluate the student's Plan of Study to determine whether the proposed plan is appropriate and whether additional coursework will be necessary. **Deviations to the Plan of Study require approval of the Advisory committee. An amended copy of the Plan of Study will be prepared, reviewed by Advisory Committee members and a signed copy filed as for the original Plan of Study.**

7. Student Records

The student's official university permanent record is maintained in the University Registrar's Office. Materials in a graduate student's departmental file include the admission application materials, transcripts, grade records, change of schedule forms, forms for financial support and assignments, and any correspondence concerning the student's graduate program.

8. Grievance Procedures

Discussion with an adviser, supervisor, Human Nutrition Graduate Studies Chair, Program Leader, Department Chair or College Dean normally leads to resolution of a grievance. There may be instances in which recourse to these persons does not provide resolution. The Council on Research and Graduate Studies has established grievance procedures (see the *Graduate School Handbook*).

9. Completing the Didactic Program in Dietetics Requirements While Enrolled in a Graduate Program

Graduate Students who desire to complete Didactic Program in Dietetics (DPD) courses in order to receive a Verification Statement to become eligible to apply to dietetic internships must complete an application and be accepted to the undergraduate DPD. Although it is not necessary to complete a second bachelor's degree, students must be accepted into the American Dietetic Association accredited program in order to receive the Verification Statement. Students should wait to be admitted to the DPD before proceeding with courses. Applications are reviewed during the first week of each semester; therefore it may take several months until acceptance is received. **Application can be made through an Undergraduate Advisor, or Dr. Tonya Orchard, Director of the DPD program.** In addition to the personal statement that is included with the DPD application, Graduate Students must also submit a letter of support from their graduate advisor acknowledging they are aware that the student is applying to the DPD program and that they are in agreement with the student's decision to complete the DPD while also completing the graduate program.

10. The Dietetic Internship Program

Students accepted into the Master of Science in Human Nutrition degree may also apply for and be accepted into the Dietetic Internship Program. This program is currently accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association. The application to the Dietetic Internship program is separate from the application to the MS graduate program.

V. The M.S. Program

1. Getting Started

Admission into the program is contingent on identifying a HN faculty member to serve as the Advisor for the thesis research. As outlined in Section III.3, you will next form your Advisory Committee by identifying two additional members of the faculty to assist your adviser with your training, counseling and evaluation. An important task is to determine whether the thesis or research project is appropriate for your immediate and long-term goals. Your adviser and the Advisory Committee will help to guide you towards the decision.

Time to Complete the M.S. Degree: The Master's of Science degree in Human Nutrition requires a research thesis or research project. As is true with any research project in the life sciences, successful completion of a research project in Human Nutrition depends on a number of factors including the behavior of subjects or responsiveness of experimental animals, performance of peer scientists, and your own performance as a graduate researcher. These factors contribute to the successful completion of thesis or project requirements and are in addition to fulfilling other duties such as teaching assistantships, committee work, and completion of workshops, classes and other training opportunities.

The Graduate Studies Committee of the Program in Human Nutrition has established a **maximum time limit of 5 years** to complete the MS degree after admission to the program.

2. The Thesis

A. The Thesis Proposal

As soon as you and your adviser have formed preliminary plans for a Master's thesis project, a proposal will be prepared for evaluation by your Advisory Committee. Guideline for preparation of the thesis/proposal are in **Appendix D**. It is expected that you will work closely with your adviser to complete your proposal before it is submitted to the committee. The research proposal consists of an essay of at least 3-5 pages and includes at least an introductory chapter that lists research questions and/or hypothesis, a literature review and an outline of proposed methods (see **Appendix D**). The Advisory Committee may require additional information to be included also. The proposal must be submitted to the committee members at least one week prior to the proposal review meeting. At this meeting the committee will discuss the merits of the proposal and suggest changes intended to improve the quality of the research. The proposal meeting is intended to be advisory, and frequently leads to important improvements in the research project. The Advisory Committee may approve the research as proposed or may ask for revisions in which case another proposal meeting may be required, or may recommend that the proposed research represents a project rather than thesis research. See the Appendix D for the proposal and thesis format requirements. The thesis proposal should be completed and approved by the end of the 2nd semester after admission to the program.

B. The Thesis Defense

When you have completed data collection and analysis for your M.S. work, it must be written as a thesis and submitted to your Advisory Committee. The student is strongly advised to consult the Graduate School calendar at this point to ensure that he/she is completely cognizant of graduation deadlines and that the thesis defense and all committee activities are planned accordingly.

Typically, the adviser works very closely with the student until he or she is satisfied that the document is sufficiently complete and of sufficient quality for a meeting of the entire committee. At such time, the student must provide committee members with a hardcopy (not as an electronic copy) of a draft of the thesis at least 1 week prior to the defense date. In the great majority of cases, the defense meetings will result in a number of suggested or required revisions in the thesis. Students should follow the guidelines set forth by the OSU Graduate School when preparing the thesis. Additional format requirements of the department are listed in Appendix D.

The defense of the thesis consists of three components, i.e., the thesis document, a departmental presentation and the oral examination.

The thesis defense will begin with a 30-40 minute oral presentation of the thesis research. This seminar will be open to the faculty and graduate students and will be announced through the department office. After brief questioning by those in attendance, a closed session with the student and the Advisory Committee will commence. Committee members will ask the student questions related to their general knowledge of nutrition, the thesis research and the intellectual foundations of the research. The oral examination will last 1-2 hours. After the questions, the committee will deliberate to assess the performance of the student. Upon completion of the examination, the student is asked to leave while the Advisory Committee determines if the student's performance was satisfactory. If it is satisfactory, the committee members sign the Master's Examination Report, which is returned to the Graduate School.

Three possible outcomes for the thesis document are possible: acceptance, provisional acceptance, and rejection.

Acceptance of the thesis indicates that the student has met the standard set forth for theses by the department and has satisfactorily completed the oral defense. Minor revisions may still be required of an acceptable thesis prior to its submission to the graduate school. Generally, the adviser will supervise these revisions. All committee members are required to sign the thesis approval form that is returned to the Graduate School with the thesis. It is recommended that the student take a copy of the thesis to the Graduate School for review of format and style before preparation of the final copy.

Provisional acceptance may also be granted if the quality of the student's thesis is acceptable, but his or her ability to defend the thesis is inadequate. In such cases, the committee will clearly define the steps needed for the student to overcome the inadequacy. Inability of a student to rectify any inadequacies will result in subsequent rejection of the thesis and failure of the defense.

A second possibility that will result in **provisional acceptance** occurs when there are substantial problems with format, content, or analysis of the thesis that make it unacceptable as written, but that upon revision the document will likely be acceptable. The committee will outline the problems in writing and present them to the student. Prior to acceptance, the student must convene an additional meeting to explain the revisions to the entire committee. All committee members must approve the revised thesis and sign the Approval Form.

Rejection of a thesis indicates that the student has not adequately conducted, analyzed, or interpreted the research that was proposed. In such cases, the student will be either dismissed from the program or will be required to initiate a new thesis project.

C. Submitting the Thesis to the Graduate School

Thesis submission to the Graduate School is electronic. Please consult the Graduate School Handbook for current procedures for submitting the thesis.

The student is also required to provide a final soft or hard bound copy of the thesis to the Department. A copy of the thesis also should be presented to the adviser. Provision of final copies to other members of the committee is optional.

Acceptable binding of the department, advisor and committee copies will consist of a plastic or spiral binding with either a clear or black cover on the front and back. Three-ring binders are not acceptable.

VI. FINANCIAL ASSISTANCE

1. Graduate Associateships

The Human Nutrition Graduate Studies Committee reviews applications for Graduate Associateships and makes recommendations to the Department Chair. The Department Chair, consistent with available funds, appoints Graduate Associates (Teaching, Research, and Administrative). Appointments for a tuition waiver and stipend are usually for two consecutive semesters beginning with autumn semester with a tuition and fee authorization only for the third (summer) semester. Funding for summer stipends are arranged individually and are not guaranteed.

A graduate student's principal objective is to earn a graduate degree. An appointment as a GA contributes to that objective by providing an apprenticeship experience along with financial support. Specific GA responsibilities are determined by the employing unit. These may include teaching classes, recitations, and labs; tutoring, advising and counseling students; proctoring and grading examinations and assignments; gathering and analyzing data; writing reports; and, assisting staff. Individual faculty may provide funds for graduate students to do research in their program. Participants are expected to meet the requirement set by the supporting faculty member. The expectations must be in compliance with the standard guidelines of the Department and University for employment.

Eligibility: To hold a GA appointment in the Department of Human Nutrition, a student must satisfy the following requirements.

- pursuing a graduate degree at The Ohio State University
- registered in the Graduate School for eight (8) credit hours during each semester a 50% GA appointment (20 hours per week) is held, except during Summer Semester, when the minimum is four (4). GA's holding a 25% appointment (10 hours per week) must register in the Graduate School for at least four (4) credit hours during each semester, except during the summer session, when the minimum is two.
- be in good academic standing in the Graduate School when the appointment or reappointment becomes effective
- not currently in the internship portion of the Dietetic Internship program
- demonstrate reasonable progress toward a graduate degree
- satisfy other requirements published by the Graduate Studies Committee or employing unit
- must certify proficiency in spoken English before assuming GTA duties involving direct student contact (applies only to international non-English speaking graduate students)

Students awarded graduate research associateships (GRA) and graduate teaching associateships (GTA) administered through the Department and awarded for at least 50% time, receive full tuition and fee authorization in addition to the modest stipend.

Application: New applicants having indicated interest on the application form and having submitted their complete application by **December 1st** will be considered for a graduate associateship. These applicants will be evaluated using the following criteria:

- undergraduate and graduate academic record
- letters of recommendation from persons in a position to assess academic and professional potential
- experience in research, teaching and/or extension and non-University employment;
- oral and written communication skills
- professional interests
- needs of the department
- length of time available for service

Current graduate associates, and other graduate students should file an application for appointment/reappointment by February 15. Failure of a current graduate associate to file a

renewal application by February 15 will be assumed to mean that the student does not desire continuation of appointment beyond the period of current employment.

Graduate associates will be considered for reappointment based on:

- application
- satisfactory performance with current appointment;
- satisfactory performance in courses and with scholarly activities
- availability of funds

When funds are not sufficient to meet all qualified requests for graduate associate positions, graduate associates with degree programs in progress will receive priority consideration over new applicants.

The Human Nutrition Graduate Studies Committee reviews applications and makes recommendations to the Program Leader. Decisions are made during the Spring semester and appointments are announced as soon as possible, but no later than two weeks after the Board of Trustees has approved the University Budget.

Vacation time: Taking vacation time will delay the progress toward successful completion of a master's thesis or project. In the simplest of terms, the completion of a project or thesis will not be accomplished until the work is done. Research does not know time and therefore the work behind research is timeless.

An excerpt from the OSU Graduate Student Handbook states for Graduate Associates (G.A.s): "Rules regarding time off during semester breaks or other times are determined by the GA's employing unit. GA's must check with their employing units to determine when they are expected to be on duty." "GA's do not accrue vacation or sick leave. However, emergencies and other special personal situations may arise that require short-term absence from duty." In addition as stated in the handbook, the "GA's are responsible for pursuing a graduate degree single-mindedly without allowing undue distractions to delay progress."

Prior to planning any vacation or leave time, written authorization from your committee chairperson is required. A copy of this documentation should be kept by you and your chairperson. In addition, you should have selected and notified your committee members in writing prior to travel or taking vacation or leave time. Any offer to support you as a Graduate Associate is contingent on your progress and accomplishments as a graduate student and a citizen of the department.

Evaluation: Graduate Teaching Assistants, Graduate Research Assistants, and Graduate Administrative Assistants and the supervising faculty members should engage in systematic evaluation of the graduate associate's performance each semester. Evaluation forms are to be completed by GA and the faculty supervisor, submitted to the GSC and maintained in student's department file. Frequent informal interactions between the faculty member and the GRA are encouraged as a highly effective means of professional development and performance appraisal. The evaluation should be signed by both faculty member and graduate associate to indicate agreement on content. In case of disagreement, statements from each should be included on the form. Completed evaluation forms are placed in a graduate associate's confidential departmental file. Performance evaluations should be completed at

the end of the Spring Semester and are reviewed as part of the process for continued financial support and recommendations.

2. Awards

Awards include the **Virginia M. Vivian Endowment Fund** to Support Graduate Student Research in Human Nutrition and the **T. Kline Hamilton Endowment Fund** to Support Graduate Student Research related to milk, milk consumption, or health benefits associated with milk. Please see the departmental website for further details concerning application requirements and deadlines.

3. Travel Support:

Students who have been accepted for an oral/poster presentation at a national professional meeting, who are listed as lead author and who are presenting original research can apply for a Graduate Student Travel Grant. Please see the departmental website for further details concerning application requirements and deadlines.

Appendix A

Admission Procedure and Standards for Admission

Admission to the Master of Science Program is in the Autumn Semester only. Applications are submitted online through Ohio State University Graduate Admissions (gradadmissions.osu.edu). **Applications to the program should be directed to program code #231.** Complete applications must be received by December 1 to be considered for financial support.

Admission is based on a number of criteria. Competitive students will meet or exceed the criteria listed below:

- An earned baccalaureate degree from an accredited institution.
- A cumulative point-hour ratio at or above on all previous undergraduate (3.25/4.00) and graduate work (3.50/4.00).
- For international students, competitive applicants will have scored minimum or higher: TOEFL, 600 paper, 250 CBT; IBT, 100; MELAB, 86; or IELTS, 8.0, unless a prior degree was earned in an English-Speaking Country.
- Completion of the Graduate Record Examination (GRE). Competitive applicants will have scored minimum or higher: Verbal, 60th percentile; Quantitative, 45th percentile; Writing, 50th percentile.
- Admission into the program is contingent on identifying a Human Nutrition faculty member to serve as the advisor for the thesis research.

Program Prerequisites

The Master of Science in Human Nutrition, is a science-based program. A solid base in scientific principles is required for admission.

Required Course	
Biochemistry	Biochemistry 4511
The Most Complete And Competitive Applicants Will Also Have Completed:	
Fundamentals of Nutrition	HN 2210 or 2310
Organic Chemistry lecture	Chemistry 2510 and 2520
Chemistry laboratory	Any Chemistry Laboratory Course
Vertebrate Physiology	EEOB 2520
Statistics	Statistics 1350 or 1450

Course descriptions can be found through the OSU Registrar's website.

- All students, once admitted, will achieve the desirable prerequisite level of courses before they enter the graduate level 7000 series nutrition courses.
- Equivalent courses may be accepted with permission of the Graduate Studies Committee

Students coming from other Universities or Colleges should view the Ohio State University course descriptions for the prerequisite courses by clicking on each title. Look for equivalent courses from the University or College where prerequisite courses are being completed.

Statement of Purpose:

The statement should be approximately 1000 words or less in length and should include answers to the following questions:

- Why are you interested in the MS program in Human Nutrition at Ohio State University?
- As a citizen of the Program in Human Nutrition at Ohio State University, what will you bring in terms of leadership, service, and experiences?
- What are your long- and short-term professional goals?
- What are your strengths and weaknesses?
- Describe your background in research and/or work experiences that will contribute to your work in Human Nutrition.
- What research area(s) are you interested in and with whom you are interested in pursuing graduate work at Ohio State University?

Letters of Reference:

Three letters are required. Letters should be written by individuals who are familiar with the applicants' academic performance and who can comment on the applicant's potential as a graduate student. If the applicant has not been a student for five or more years, letters will be accepted from current employers within a field allied to the discipline to be studied. Forms for Letters of Reference are available on the **Graduate Admissions web site**.

Application Materials that should be sent to Graduate Admissions at The Ohio State University.

- Online application (submitted electronically)
- One official transcripts from each college or university attended
- Application fee
- Official GRE and TOFEL scores (if applicable)

Application Materials that should be sent to the Department of Human Sciences (Program in Human Nutrition) at The Ohio State University

- Copy of application submitted online
- Copy of official transcript of previous coursework
- Letters of reference
- Statement of purpose

The Graduate Compact

It is essential that graduate students:

- **Conduct** themselves in a mature, professional, and civil manner in all interactions with faculty, staff and other students.
- **Recognize** that the faculty adviser provides the intellectual and instructional environment in which the student conducts research, and may, through access to teaching and research funds, also provide the student with financial support.
- **Recognize** that faculty have broad discretion to allocate their own time and other resources in ways which are academically productive.
- **Recognize** that the faculty adviser is responsible for monitoring the accuracy, validity, and integrity of the student's research. Careful, well-conceived research reflects favorably on the student, the faculty adviser, the department, and the university.
- **Exercise** the highest integrity in taking examinations and in collecting, analyzing, and presenting research data.
- **Acknowledge** the contributions of the faculty adviser and other members of the research team to the student's work in all publications and conference presentations.
- **Maintain** the confidentiality of the faculty adviser's professional activities and research prior to presentation of publication, in accordance with existing practices and policies of the discipline.
- **Take** primary responsibility to inform themselves of regulation and policies governing their graduate studies.
- **Devote** an appropriate amount of time and energy toward achieving academic excellence and earning the advanced degree.
- **Be** aware of time constraints and other demands imposed on faculty members and program staff.
- **Take** the initiative to ask questions that promote comprehension of the academic material and advance the field.
- **Communicate** regularly with faculty advisers especially in matters related to research and progress within the graduate program.

It is imperative that graduate faculty:

- **Interact** with students in a professional and civil manner in accordance with university policies governing nondiscrimination and sexual harassment.
- **Impartially** evaluate student performance regardless of religion, race gender, sexual orientation, nationality, or other criteria that are not germane to academic evaluation.
- **Serve** on graduate student committees without regard to the race, gender, sexual orientation, or national origin of the graduate student candidate.
- **Prevent** personal rivalries with colleagues from interfering with their duties as graduate advisers, committee members, or colleagues.
- **Excuse** themselves from serving on graduate committees when there is a potential for conflict of interest arising from a familiar or personal relationship between the student and the faculty member.
- **Acknowledge** student contributions to research presented at conferences, in professional publications, or in application for copyrights and patents.
- **Teach** and demonstrate ethical behavior in research/creative efforts.

Program in Human Nutrition Graduate Student Citizenship

Citizenship of graduate students in the Program in Human Nutrition extends to our efforts in the areas of teaching, research and outreach.

Scope: Graduate students have the primary responsibility to achieve high academic standing and to conduct their scholarly work with diligence. As members of the Program in Human Nutrition professional community, and as student employees of the University, service is expected to support the total scope of the departmental mission, regardless of the source of funds for employment.

Expectations: All students, whether or not they receive funding through fellowships, scholarships, graduate research associateships, graduate teaching associateships, or graduate administrative associateships, are citizens of the professional community in the Program in Human Nutrition. All students may be asked to assist with the following in a manner commensurate with the nature of their appointment:

Teaching:

- Proctoring of examinations and quizzes for any class taught in the program, including those with assigned GTA support
- Grading of class assignments when the time commitment exceeds the reasonable abilities of assigned graduate teaching assistants to complete the assignments, or for faculty members who are teaching classes with enrollments over 75 and that do not have GTA support.
- Take responsibility to maintain general upkeep and care of teaching facilities, including media, computers and other electronic equipment; report need for service to appropriate faculty/staff.
- Develop effective oral and written communication by preparing a lecture from outline to delivery.
- Provide other service as the need arises

Research

- Assist with the recruitment of a high quality student body by interacting with applicants, participating in recruitment events, and promoting the high quality of the program, faculty and students
- Actively participate in the general upkeep and care of research facilities; report need for service to appropriate faculty/staff.
- Maintain the security of the laboratory; comply with rules and guidelines.
- Cultivate an environment that will nurture research and scholarly endeavors.
- Provide other service as the need arises

Outreach

- Assist with the delivery of community based education and information as requested
- Provide other service as the need arises

Training: All graduate students will participate in a research and teaching service program the first semester they enter their graduate program. The research and teaching service course may include:

- 1: General information (given at orientation by the Graduate Studies Committee)
 - a. personal safety and orientation to University safety policies and procedures
 - b. academic misconduct – recognizing, practicing ethical behavior, reporting responsibilities and procedures
 - c. use of media and other electronic equipment; procedures for usage
 - d. department library use, policy and procedures

- 2: Support for classroom teaching (taught by technical support staff; faculty)
 - a. computer support
 - b. proctoring examinations – procedures; responsibilities
 - c. grading – procedures; responsibilities
 - d. interactions with undergraduate students – classrooms, electronic communication; office hours

- 3: Teaching in a classroom; lecturing and beyond (taught by faculty)
 - a. management issues
 - b. lecturing from outline to delivery
 - c. classroom politics

- 4: (taught by faculty/staff)
 - a. laboratory safety

Appendix D

Guidelines for the Thesis/Proposal

A. The M.S. Thesis Proposal

The thesis proposal is a description of the research you intend to conduct for your M.S. degree. It should contain a clear conceptual basis for the research, as well as a concise description of the methods to be used to complete the research. Because M.S. thesis projects are often assigned to students by their advisers, cooperation between the adviser and the student is essential to the completion of a quality thesis proposal. Students should prepare and submit the proposal to their Advisory Committee by the end of the second semester in the program. The proposal should be long enough to adequately address the 3-4 sections outlined below. The proposal should be typed and include text, figures, tables and references. The font size should be 12 point. Within the proposal three sections should be clearly delineated:

a. Introduction. This section describes the rationale and the intellectual basis for the proposed research. The M.S. thesis proposal should clearly define a research hypothesis as well as one or two specific aims related to the hypotheses that are to be accomplished by the proposed research.

b. Review of Literature. This section explains the research that has been conducted by other investigators pertaining to the proposed research. Students should avoid simply listing results of published research. They should interpret and integrate these studies and clearly explain how these studies led to the formulation of the research hypothesis and the specific aims of the proposed thesis research.

c. Study Design and Methodology. In this section, students should describe the study/studies that will be used to test the research hypothesis and complete the specific aims of the proposed thesis research. The description of methods should be sufficient to demonstrate that the student has a clear understanding of the procedure. It is not intended to serve as a step-by-step protocol to complete a given procedure.

d. Preliminary Data Data already generated by the student or results from the mentor's database that are pertinent.

B. The Thesis Format (Note: The Graduate School has very specific margin, typeface, spacing, and abstract guidelines that must be met before the university will accept a Thesis. Students should check the Guidelines for the Preparing Theses, Dissertations and D.M.A. Documents before starting their writing. An outline and explanation for the standard format used in the Department of Human Nutrition follows.

a. Title Page – required advisor signature

Abstract (350 words) This is a brief synopsis of the research hypothesis and specific aims, experimental approaches, and major findings of the thesis or dissertation. (This is the length of abstract required for University Microfilms, Inc.) (See Graduate School Handbook)

b. Table of Contents (including major sections, figures, tables, and appendices).

c. Introduction

This section describes the rationale and the intellectual basis for the proposed research. In other words, “Why is this research important?” M.S. thesis should clearly define a research hypothesis as well as one or two specific aims related to the hypothesis that is to be accomplished by the proposed research.

d. Review of Literature

This section explains the research that has been conducted by other investigators pertaining to the Thesis. The length of this section can be explicitly defined by the Thesis prior to initiation of writing. Students should be elective in the areas that are reviewed and they should avoid rambling discussions of issues only peripherally related to the thesis. Students should avoid simply listing results of published research. They should interpret and integrate previous studies and clearly explain how these studies led to the formulation of the research hypothesis and the specific aims of the proposed thesis research. The citations can be listed in any one of several journal formats (examples are: The Journal of the American Medical Association, the Journal of Nutrition, and the American Journal of Clinical Nutrition).

e. Research Chapters (introduction, methods, results, discussion)

Research is reported to the nutrition community in the form of research communications. Students should organize their research findings into publishable manuscripts. The journal format is at the discretion of the student and should be chosen after consultation with his or her adviser. The department requires only that the student identify the journal format used for each manuscript (each manuscript format may be different from one another). This will be accomplished by including the information (along with the title of the article, and a listing of all authors) on a face page before the abstract for the manuscript. There should be a single list of References at the end of the document rather than references at the end of the review of Literature and after each Research Chapter. Although there is no set number of manuscripts that are required for a Thesis, a reasonable guideline to follow is one or two manuscripts for a M.S.

f. Epilogue

The aim of this section is to integrate the information that was presented in the research articles into a coherent whole and to provide an overall conclusion to the thesis research. This is particularly important if the thesis contains more than one manuscript. In addition, a student should use this section to describe the problems that were encountered during the research process and he or she should suggest alternate approaches that might be used to overcome such problems. Finally, the student should give his/her opinion regarding the directions that their project might take in the future.

g. Appendices

This section should include any relevant information that was not included in the manuscripts but which is necessary for a complete understanding of the research. Students should consult with their advisers for specific inclusions. Some appropriate items include:

- recruitment material for human studies
- informed consent form for human studies
- data collection instruments
- preliminary data that was not included in the manuscripts
- full detailed descriptions of unique methods developed in the course of the thesis research.

Appendix E

Guidelines on the Ownership of Research Data

Many students ask the question “Who does my Thesis research and data belong to? My mentor or me?” This can be a difficult question to answer unambiguously for all students in all circumstances. The faculty believes that this issue should be discussed early in the degree process; that clear, open, and frequent communication and unambiguous documentation of agreements is probably the only way to prevent future disputes. Generally, the faculty believes that all data that are generated during the thesis belongs to the research group. Thus, all original pieces of data, documentation and data files should remain with the research group when the student leaves OSU. However, the student has generated the data and may need the data to write manuscripts after they leave OSU, therefore, students should have free and open access to the data they have generated. A reasonable compromise is for students to copy the data they generated. Of course, after a student has left OSU, he or she should respect the rights of his or her mentor and should not share unpublished data from the thesis before consulting with the mentor. A more difficult issue is how students and their mentors should address the possession of ideas. Intellectual property rights are an area of legal controversy; there are no clear guidelines regarding who “owns” an idea – especially one generated during routine discussions between the student and the mentor. A rule of thumb is that if it is an idea generated after a student has entered the research group, it is the possession of the research group, unless a statement to the contrary is clearly stated in writing by the research leader. Ideas that are developed by a student prior to enrollment and then brought to the research group belong to the student. The student may wish to document the existence of these ideas to ensure they were in existence prior to joining the research group. Clear communication and open discussion of these issues is the only way to limit the potential for future disputes regarding ownership of either ideas or data.