

Food Science and Human Nutrition Graduate Program Handbook

Department of
Food Science and Human Nutrition

College of Agriculture and Natural Resources
and
College of Natural Science

Michigan State University

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LIST OF FREQUENTLY USED TELEPHONE NUMBERS

EMERGENCY (on and off campus)

911

Dept. Food Science and Human Nutrition	204 G.M. Trout FSHN Building	355-8474
Academic Computing & Network Services (ACNS)	220 Computer Center	355-3600
ACNS Help Desk	220 Computer Center	432-6200
MSU Bikes Service Center	B10 Bessey Hall	432-3400
Biochemistry Stores	2 Biochemistry Building	353-0813
CATA Bus Service	On Campus	432-2282
	Off Campus	394-1000
Career Services & Placement	113 Student Services	355-9510
Council of Graduate Students (COGS)	316 Student Services	353-9189
Coll. of Agriculture & Natural Resources (CANR)	121 Agriculture Hall	355-0234
College of Natural Science (CNS)	103 Natural Science Building	355-4470
Computer Store	110 Computer Center	432-0700
Counseling Center	207 Student Services	355-8270
Dairy Store	1140 Anthony Hall	355-8466
English Language Center	A714 Wells Hall	353-0800
Federal Credit Union	600 E. Crescent	353-2280
Office of Financial Aid	252 Student Services	353-5940
Graduate School	118 Linton Hall	355-0301
Institutional Review Board	202 Olds Hall	355-2180
Instructional Media Center	126 Instructional Media Center	353-3960
International Studies and Programs	209 International Center	355-2350
Kellogg Hotel & Conference Center	Kellogg Center	432-2000
MSU Library Information		353-8700
MSU Extension Service	108 Agriculture Hall	355-2308
Office of Radiation, Chemical & Biological Safety (ORCBS)	C124 Research Complex – Engr	355-0153
Olin Health Center		355-4510
Owen Grad. Center Reception Desk	Owen Graduate Center	355-4216
Payroll	350 Administration Building	355-5010
Department of Police & Public Safety (DPPS)	87 Red Cedar Road	355-2222
Registrar's Office	150 Administration Building	355-3300
Spartan Bookstore	International Center	355-3450
Center for Statistical Training & Service	178 Giltner	353-9288
Transportation Services (Motor Pool)	134 Central Services	353-5280
MSU Union Building	Main Office	355-3460
University Information	On Campus	0
	Off Campus	355-1855
University Lab Animal Resources	C100 Clinical Center	353-5064
University Stores	133 Service Road	355-1700
Vehicle Registration	Dept. of Police & Public Safety	355-8440

THE GRADUATE HANDBOOK FOREWORD

Welcome to the graduate program in the Department of Food Science and Human Nutrition at Michigan State University. We hope that this Graduate Student Handbook will provide all of the necessary information to make your stay in the Department both successful and enjoyable.

This handbook provides a summary of Department, College, and University policies for graduate students. Responsibilities of graduate students are also outlined. To avoid misunderstandings or mistakes, please read all parts of the handbook. Your Major Professor is also an important source of information.

Requests for modifications of policies listed in this Handbook or time extensions due to extenuating circumstances should be submitted in the form of a petition to the Chair of the FSHN Graduate Affairs Committee (GAC) for review by the committee.

We hope that you will participate in all of the Department's academic and social programs during your studies in Food Science and Human Nutrition. It is important also that you apply for scholarships and awards given by the Department, College, and national organizations. Please work with your Major Professor in preparing the documentation for these awards. Watch the appropriate notice boards for announcements of rules and deadlines for the various awards. All have a monetary prize, but equally important is the recognition of your excellence. It is important for you to have documentation of these successes on your resume; it is important for this Department to demonstrate that FSHN/MSU students are among the best in the nation.

Graduate students are an important component of a department. You are the present phase of a long history of successful graduate students who have been mentored by the faculty of this Department. You will find many FSHN/MSU graduates in important positions in industry, government, and academia. You as students, and we the faculty, have an obligation to see that you get the very best training so that you can carry on this tradition in successful careers.

On behalf of the faculty and graduate students I extend appreciation to the Graduate Affairs Committee (GAC) for the preparation of this Handbook.

Gale M. Strasburg, PhD
Professor and Chairperson
Department of Food Science and Human Nutrition

1. THE FIRST SEMESTER AT MSU

1.1. Introduction

This handbook was developed to help the student become oriented at MSU. This handbook is intended primarily to supplement and extend the information in the Academic Programs handbook published by Michigan State University. Academic Programs is MSU's legal document describing graduate programs. Students are expected to be aware of the information therein whether or not it is specifically restated in the departmental handbook.

1.2. Administrative Organizations

Two different colleges administer graduate programs in the Department of Food Science and Human Nutrition. The College of Agriculture & Natural Resources (CANR) administers the Food Science (FSC) program, while the Colleges of Agriculture & Natural Resources (CANR) and Natural Science (CNS) jointly administer the Human Nutrition (HNF) program. Requirements and procedures may vary slightly between colleges. Wherever possible the differences are pointed out in this handbook, but some variations may have been overlooked. Graduate students should familiarize themselves with the requirements and regulations of the specific college under which their major is administered.

1.3. Program Formulation

Prior to choosing courses, the student should consult the University Registrar's Office website at <http://www.reg.msu.edu/> for the most up-to date information concerning 1) Description of Courses, 2) Academic Programs, and 3) Schedule of Courses and Calendar.

Specific courses will be selected by the student in consultation with the Major Professor in accordance with the specific interests and qualifications of the student. In addition, all international students must take an English proficiency test and follow the recommendation of the English Language Center with regard to enrolling in English language courses.

1.4. Enrollment Procedures

The following items must be obtained prior to enrollment.

1. Personal Identification Number (PID) and Personal Access Number (PAN).
2. The Major Professor's approval of the schedule of courses.
3. Proof of assistantship or scholarship (will be provided by Department for billing).
4. Information on time of enrollment.
5. Clearance from the International Student Office (for first-semester international students only).

Students must have their Personal Identification Number (PID) and their Personal Access Number (PAN) for online registration at <http://www.reg.msu.edu/roinfo/enrollment.asp>. The selection of a Major Professor is the student's prerogative, however, a Major Professor is assigned at the point of admission. Admission is contingent on the availability of and acceptance by a faculty member agreeing to serve as a Major Professor (Section 3.4). A student may select an alternate Major Professor according to the guidelines for changing a Major Professor (Section 3.5). The Major Professor must approve the course schedule. Once approved, the official schedule must be prepared by the graduate student on the enrollment form.

Students should have the telephone numbers of the department (355-8474) and their Major Professor when enrolling during regular University business hours if any questions arise.

Students with assistantships: Students who are on assistantships will be assessed the residential rate of tuition and fees and are entitled to nine credits tuition waiver for Fall and Spring semesters and four credits tuition waiver for Summer semester.

Students without assistantships: For MS candidates without an assistantship, full time is considered 9 credits. For Ph.D. without an assistantship, full time is considered 6 credits. With ¼ or ½ time assistantships, minimum is 6 and 3 respectively.

International students: First-semester international students are required to have clearance from the International Student Office prior to registration. This clearance is obtained at the International Student Office (Room 109, Center for International Programs). All international students are required to have health insurance prior to registration. All international students should check their visas and make sure that their proposed course hour load is consistent with the terms of the visa. Specific information on credit-hour loads and visa regulations is available from the International Student Office.

Health services: All regularly enrolled graduate students are provided with health services during the semester in which they are enrolled. All graduate assistants are provided with health insurance. Students may also purchase a Health Service card at Olin Health Center. International students are required to purchase Michigan State University's foreign student health and accident insurance plan for themselves and family members in the United States. See the Academic Programs handbook for more information.

Motor vehicle registration and parking: Students at MSU are required to register all motor vehicles as described in the current student motor vehicle regulations. Generally, students on assistantships can obtain parking permits which will allow them to park their vehicles on the campus, south of the river. Other graduate students can obtain permits to park at designated lots. Proof of appointment will be required for students on assistantships to obtain parking privileges. All students must present their vehicle registration, student ID, valid current driver's license and last year's gate key card (if they had one), before the current year's MSU vehicle registration can be obtained.

Bicycle Permits: Bikes operated or possessed on campus must have a valid permit affixed and must be parked at a bike rack, locked, and in operable condition. To register your bicycle, you must have the serial number from the bike. This may be found in several different places on bikes depending on the make and model. The most common location for bike serial numbers is just under the seat and underneath the bike below the pedals. Be sure to know the make of the bike, the color of the bike, and whether the style is male or female. There is no cost for a bike permit. Bike permits must be obtained online. All permits must be properly affixed to your bike before they are considered valid.

Sporting and cultural events: Students who are enrolled full time are eligible:

- To purchase football, basketball, and/or hockey season tickets for themselves and their spouses at reduced rates.
- For free admission to other regularly scheduled athletic events.
- For student discounts on series and single tickets to professional performing arts events at the Wharton Center for Performing Arts.
- To purchase one guest ticket to professional performing arts events at the Wharton Center for Performing Arts at the student rate. One validated student ID card must be presented with every two student-rate tickets when attending a performance.

1.5. Drops and Adds

Specific information is available in the Schedule of Courses and Calendar concerning the procedure to add or drop a course. The graduate student is advised to be familiar with this information prior to the time of enrollment. No course changes may be made without the Major Professor's approval. Drops and adds will be handled by the same computer method as enrollment during the first eight days of class. After that they will be handled in the department or college offices.

2. UNIVERSITY POLICIES

2.1. Introduction

Certain statements of University-wide policy and/or facilities will likely have a direct effect on your welfare. The policies are described in detail in other publications such as the [Academic Programs](#), [Schedule of Courses and Calendar](#) and [Graduate Student Resource Guide](#).

2.2. Credits and Grades

Graduate students in the Department of Food Science and Human Nutrition are required to maintain a 3.0 average to remain in good standing. University regulations require that every full time graduate student using University facilities be registered for a minimum of 1 credit. For MS candidates without an assistantship, full time is considered 9 credits. For Ph.D. without an assistantship, full time is considered 6 credits. With $\frac{1}{4}$ or $\frac{1}{2}$ time assistantships, minimum is 6 and 3 respectively. A doctoral student (post comprehensive exam status) may register for one credit and be considered full time.

2.3. Transportation

MSU maintains an excellent bus system on campus. Specific information on campus transportation is available at the time of registration. CATA bus routes on campus connect to other CATA routes serving the East Lansing and Lansing area (<http://www.cata.org/msu/index.html>).

Many students at MSU use bicycles as transportation. The University provides racks for bicycle parking. Students must obtain a bicycle registration sticker from the Department of Public Safety at MSU, the City of East Lansing, the City of Lansing, Meridian Township or Lansing Township. To prevent theft, bicycles should be securely locked to a bicycle rack when not in use. Improperly parked bicycles can be impounded by the campus police.

2.4. Special Services

Student Services

Resource Center for Persons with Disabilities (RCPD) is responsible for the coordination of services for students with disabilities. Additional information is available at (<http://rcpd.msu.edu/>).

The Student Health Service is located in the MSU Olin Health Center. Consultation and hospital facilities are provided as specified in the Graduate Studies catalog.

The University maintains a **Veterans Certification Office** to assist veterans and war orphans who are attending the University at (517) 355-5032.

Office of Career Services and Placement in the Student Services Building is available to assist in placement for full-time, part-time or summer employment. There is a Graduate Career Consultant that is joint between the Graduate School and Career Services. The career services web site can be found at <http://careernetwork.msu.edu/>

Spartan Child Development Center is available for children of students. Contact the school directly for charges involved. The website is located at <http://www.vps.msu.edu/scdc>.

MSU offers various scholarships, fellowships, grants and short-term and long-term loans through the **Office of Financial Aid**. Students should apply directly at the Office of Financial Aids, 252 Student Services Building (3-5940). Students on assistantships or employed by MSU are eligible to use the MSU Federal Credit Union. Additional information regarding these services can be obtained by inquiry at the Credit Union located at 600 E. Crescent Road.

2.5. Graduate Student Rights and Responsibilities

Students are expected to familiarize themselves with the Academic Freedom for Students Document and the Graduate Student Rights and Responsibilities Document available through Spartan Life at <http://www.vps.msu.edu/SpLife/index.htm>. Students should conduct themselves in accordance with the procedures outlined in these documents. The documents are printed in each current issue of Spartan Life, a student resource manual. Copies are available from the Office of Student Affairs and Services, 162 Student Services Building. The scope of this document is outlined follows:

ARTICLE 1 STUDENT RIGHTS AND RESPONSIBILITIES AT MICHIGAN STATE UNIVERSITY

ARTICLE 2 ACADEMIC RIGHTS AND RESPONSIBILITIES OF STUDENTS

2.1 Preamble

2.2 Role of the Faculty in the Instructional Process

2.3 Rights and Responsibilities of the Student

2.4 Adjudication of Undergraduate Student Grievances and Cases of Academic Dishonesty, Violations of Professional Standards, and Falsification of Admissions and Academic Records.

ARTICLE 3 STUDENT RECORDS AT MICHIGAN STATE UNIVERSITY

ARTICLE 4 JUDICIAL PROCESS

4.1 Introduction

4.2 General Procedures for All Judiciaries

4.3 Due Process—Disciplinary Proceedings

4.4 Due Process—Non-Disciplinary Proceedings

4.5 Judicial Structure

4.6 Judiciary Membership

4.7 Traffic Appeals Board

ARTICLE 5 REGULATIONS, POLICIES, AND RULINGS

5.1 Introduction

5.2 General Student Regulations

5.3 Student Group Regulations

5.4 Living Group Regulations

5.5 All-University Policies

5.6 Administrative Rulings

ARTICLE 6 INDEPENDENT AND UNIVERSITY-SUPPORTED STUDENT PUBLICATIONS

ARTICLE 7 OFFICE OF THE OMBUDSMAN

ARTICLE 8 DEFINITIONS

ARTICLE 9 PROCEDURES FOR AMENDING AND REVISING THIS DOCUMENT

2.6. Graduate Assistant Illness/Injury/Pregnancy Leave Policy

A graduate assistant unable to fulfill the duties of his or her appointment because of illness or injury shall notify their Major Professor and the department Chairperson of his/her major unit as soon as circumstances permit. Similarly, a graduate assistant unable to fulfill the duties of her appointment because of pregnancy shall notify their Major Professor and the department Chairperson as soon as circumstances permit.

During the illness, injury, or pregnancy the Department shall adjust (reduce, waive, or reschedule) the graduate assistant's duties as those duties and the assistant's physical circumstances dictate. If total absence from duties becomes necessary, the major unit shall maintain the stipend of the appointment, provided the graduate assistant is still enrolled for a period of two months, or to the end of the appointment period or of the semester, whichever should occur first.

The graduate assistant shall have the right to return to the assistantship, within the original terms of the appointment, at such time as he or she is able to reassume the duties of the position.

2.7. Work Related Illness/Injury

Employees who suffer a work-related illness/injury should immediately report the injury to their supervisor. Supervisors are to immediately call 911 if the injury is a critical emergency. If the illness/injury is not critical the supervisors will complete the Authorization to Invoice MSU Form and direct the employee to the proper medical facility.

Students not employed at MSU but injured in a classroom/lab/academic activity should report the injury to the instructor or department in charge.

2.8. Equal Rights Policy

Michigan State University is committed to an active policy of no discrimination on the basis of race, creed, ethnic origin or sex. All students and employees should familiarize themselves with the Anti-Discrimination Policy and Procedures, and conduct themselves in accordance with that Policy. The Anti-Discrimination Policy and Procedures is contained in Spartan Life, a student resource manual which is available in the Department Office or from 162 Student Services Building.

2.9. Academic Integrity

All students and faculty are expected to adhere to the generally accepted practices of academic integrity throughout all aspects of their program(s). Michigan State University graduate school maintains support through its website for academic integrity in research and creative projects. MSU also focuses on faculty/graduate student mentoring and advising relationships. These are areas of high value within the department of Food Science and Human Nutrition. Please see the following links for additional details: <http://www.msu.edu/user/gradschl/>, <http://grad.msu.edu/all/ris04activities.pdf>, and <http://grad.msu.edu/all/ris04relations.pdf>.

The MSU policies for academic integrity including cheating, plagiarism, and scientific misconduct are delineated at the MSU Ombudsman's website <http://www.msu.edu/unit/ombud/honestylinks.html>. There is also a newsletter available at <http://grad.msu.edu/integrity.htm>. The Graduate School offers a series of seminars on academic integrity, Responsible Conduct of Research Program. Additional information is available at <http://www.msu.edu/user/gradschl/all/respsept.htm>. The department recommends that students attend these seminars.

2.9.1. MSU Procedures for Dealing with Allegations of Misconduct in Science

"The graduate student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades and professional standards." (Graduate Students Rights and Responsibilities at Michigan State University, Sec. 2.3.7).

"When sanctions other than or in addition to a penalty grade are involved, the college hearing board has original jurisdiction, and the University Graduate Judiciary has appellate jurisdiction over academic dismissals and disciplinary cases against graduate student relating to academic dishonesty, violations of professional standards, or falsification of admission or academic records." (Ibid., Sec. 5.5.1, and the parallel language in 5.5.1 of Medical Students Rights and Responsibilities at Michigan State University available in the Medical School

offices and The Graduate School). The department Chairperson has the responsibility for communicating and facilitating all academic misconduct actions by faculty or students. The MSU procedures for judiciary board actions are delineated in the Ombudsman's website (<http://www.msu.edu/unit/ombud/>)

2.10. Human Subject Research

Policy on research with human subjects: Graduate or undergraduate student research programs may involve the use of human subjects. "Human subject" is defined as an individual about whom an investigator conducting research obtains (1) data through intervention or interaction with the individual or (2) identifiable, confidential information about the individual. Both Federal and University regulations require that all proposed research projects involving human subjects be reviewed and approved by an Institutional Review Board **prior** to the initiation of such studies.

At Michigan State University, that Board is the University Committee on Research Involving Human Subjects (UCRIHS) <http://www.humanresearch.msu.edu/>. All applications for human subject approval are to be submitted via this website. Specific information regarding procedures for obtaining appropriate review of proposed research projects involving human subjects is available from either the Office of the Dean of the student's college, the Office of the Vice President for Research and Graduate Studies, or the FSHN Department Office.

Approval of research using human subjects must be obtained before the research is initiated. No human subject projects will be approved after the fact from the Office of the Vice President for Research and Graduate Studies.

2.11. Use of Hazardous Materials

The Michigan Department of Public Health has implemented a Medical Waste Management Act with new requirements for the handling of medical wastes. The Office of Radiation, Chemical and Biological Safety (ORCBS) has prepared the Hazardous Waste Disposal Guide to address the current legislation and permit requirements on labeling, packaging and disposing of hazardous waste. Contact your Major Professor or the department office to obtain a copy of the Hazardous Waste Disposal Guide and consult with your Major Professor regarding which biological, chemical and irradiation courses must be completed through ORCBS before initiating laboratory work. See <http://www.orcbs.msu.edu/> for further details.

2.12. Laboratory Animals in Research

At Michigan State University all laboratory animal research must be approved by the All-University Committee on Animal Use and Care; this includes funded as well as unfunded research. Compliance with University policy regarding animal use in research projects is the responsibility of the Major Professor. Michigan State University's website http://www.iacuc.msu.edu/iacuc/iacuc_index.htm provides general information, detailed procedures and applications for use of animals in research.

The work with laboratory research animals is under strict regulations in compliance with NIH standards. Prior training or instruction is required in order to conduct research with laboratory animals. No work with laboratory research animals may be conducted prior to obtaining the approval. It is the student's responsibility to verify/ascertain that the student's research professor has obtained approval for the use of laboratory animals in the student's project. The following MSU documents pertaining to animal care should be available in your Major Professor's research laboratory: "Policies, Responsibilities and Procedures for Animal Use and Care" and "NIH Guide for Care and Use of Lab Animals".

2.13. Graduate Student Governance

The Graduate Affairs Committee (GAC) acts as a direct line of communication between the graduate students and the department. The specific responsibilities are detailed in the Department Bylaws that are available from the Department Office in GM Trout, Room 204.

The Council of Graduate Students (COGS) serves as a communications link between graduate students and the university administration, and also provides numerous services. Representatives elect the Executive Board of COGS from the various departments and colleges that grant graduate degrees. COGS members serve on various university-wide planning and advisory committees and advise the Board of Trustees on matters of concern to graduate students. Through funding provided by a tax collected from graduate students, COGS provides a low-cost photocopy service, various financial aids, a dissertation copy service and other services. Short-term loans are available from COGS through Associated Students of MSU (ASMSU). For more information contact the COGS Office, Room 316 Student Services (phone 3-9189).

3. DEPARTMENTAL POLICIES

3.1. Introduction

It is important that the student become very familiar with this section. Although considerable detail is presented here, it is not expected that answers are provided to all questions. Unforeseen questions will arise and answers will be needed. In most cases, the student's Major Professor, the Department Office, or Department Chairperson will be able to provide the required information immediately. Other, more complex issues will require the advice and action of certain Departmental Committees and/or the graduate faculty.

3.2. Definition of Graduate Faculty

Faculty eligible for graduate teaching and guidance committee positions constitute the Department of Food Science and Human Nutrition graduate faculty.

The Chairperson shall make the determination of a faculty member's status within graduate faculty. This determination shall be made at the time of the initial appointment of the faculty member. A faculty member's graduate faculty status shall continue uninterrupted for the length of his/her appointment. Changes in membership or status may be made upon request of a faculty member or the Department Chairperson in accordance with the criteria set forth below.

3.3. Guidance Committee Member Status

1. Guidance committees for M.S. and Ph.D. must contain a minimum of 3 and 4 regular faculty members, respectively. Regular faculty include persons appointed under the rules of tenure and holding the rank of Professor, Associate Professor, Assistant Professor, or Instructor, and person appointed as Librarians. In addition, the principal administrative officer of each major educational and research unit of the University shall be a member of the regular faculty. One member of the Ph.D. Guidance Committee must be from outside of the Department. All members of a Guidance Committee will be at the rank of Assistant Professor or above. Any additional members of the Guidance Committee will be non-voting members.

In special cases, the Department Chairperson may authorize a faculty member not holding the rank of Assistant Professor or above to be a member of a student's guidance committee if that faculty member has special competencies and experiences which contribute specifically to the program of that student. Non tenure-stream faculty must be approved by the Dean of the College and the Dean of the Graduate School if they are to substitute for one of the four regular MSU faculty members on the committee. The Department Chairperson may authorize additional members (more than the four MSU regular faculty) to vote without additional approval. Any aberrations from these general guidelines must be approved by the Department Chairperson, the Dean of the College, and the Dean of the Graduate School prior to implementation.

2. Committee Chairperson (Major Professor) for Master's Plan A candidates must have experience in designing and conducting research.
3. Committee Chairperson (Major Professor) for Ph.D. candidates must have the following:
 - a. Earned Doctorate and rank of Assistant Professor or higher.
 - b. Experience in designing and conducting independent research or directing graduate student research.

3.4. Selection of the Major Professor

Prior to admission, students are accepted by a Major Professor according to information obtained from their application for admission and the needs of the faculty member and graduate applicant. Entering students are encouraged to discuss thesis research with several faculty in the Department and to review all program areas of interest. During the first semester of study, a student may transfer to another Major Professor provided it is agreed upon by the student and the new Major Professor. If the student does not wish to continue with the assigned Major Professor, a request for change should be initiated by the student, signed by the student and by both the temporary and the new Major Professor, and should be sent to the Department Chairperson by the end of the first semester. The Department maintains a proactive position in assisting the student in identifying an appropriate Major Professor. This is especially applicable to students who are making good academic progress and have demonstrated satisfactory faculty review. The Department Chairperson and the Director of Graduate Studies are available for consultation during the processes associated with Major Professor selection and change. Guidance by the Chairperson and Director of Graduate Studies will be granted during the transition period.

The Major Professor is ordinarily the student's academic and research advisor. In some cases, it may be appropriate that the student's research program is directed by another faculty member. In that case, the academic advisor will retain the designation of Major Professor and will be responsible for providing guidance for graduate course work, while the Research Advisor will direct the thesis research. The graduate student's Major Professor shall be a FSHN regular faculty member; the Research Advisor will be a regular faculty member from MSU.

3.5. Procedure for Changing Major Professor

Students may change Major Professors after the first semester. The Department Chairperson and the GAC will assist the student in identifying a new Major Professor, as long as the student is making good academic progress and has had satisfactory annual reviews. The student must discuss the change with the present Major Professor and the proposed new Major Professor before a formal request for change is forwarded to the Department Chairperson. A request for change of Major Professor must be initiated by the student and must include a statement of the change being requested as well as a brief explanation for the change. The signatures of both the present and the proposed Major Professors must be on the request. The request for change of Major Professor will be reviewed and decided upon by the Department Chairperson.

3.6. Admission Status

Graduate students are admitted into degree programs on Regular status or Provisional status. Provisional status is granted for various reasons. When students on Provisional status complete at least twelve semester credits with an average grade of 3.0 or better and satisfy other criteria specified on the graduate admission form, they will be considered for Regular status upon recommendation by their Major Professor. The provisional admission requirements must be met in the first year.

Requirements for Admission of B.S. Students into the Ph.D. Program. Students (with only a B.S. or B.A. degree) may be admitted directly into the Ph.D. program in either Food Science or Human Nutrition. These students must provide evidence of exceptional performance as indicated by letters of recommendation, grade point average and GRE scores. There must be strong justification from both the student and the advisor as to why direct admission into the Ph.D. program is desirable. This justification must be submitted to the Director of Graduate Studies and will be discussed with faculty during a normally scheduled admissions committee meeting. The Director of Graduate Studies will summarize the review and make recommendation to the Chairperson of the Department of Food Science and Human Nutrition for final approval of admission into the

Ph.D. program. Degree requirements will be identical to the requirements for those students entering the Ph.D. program with a M.S. degree. *Students currently in the M.S. program can transfer into the Ph.D. program according to the guidelines set forth in the graduate student handbook (see Section 4.8 and 6.8).*

3.7. Graduate Assistantships

For a list of funding opportunities for FSHN Graduate Students, see Appendix A.

Research and Teaching Assistantship support is determined on an individual basis for students on regular admission, depending upon recommendations, availability of funds, fellowship and scholarship support, and grade record. Assistantships can be funded through the FSHN Department or through faculty research funds. Assistantships are reviewed annually by the Departmental Chairperson and the Graduate Advisor, and may be renewed if satisfactory progress is being made and funds are available. Based on university collective bargaining definitions, Teaching Assistants (TA) are formally considered “university employees”. This definition does not include Research Assistants (RA), although RAs are considered employees by the payroll office. Recipients of assistantships are formally recognized by the university and must fill out proper forms (e.g. notification of intent to engage in outside work for pay) when holding off-campus jobs. Students shall be informed by March 31 regarding the status of their assistantship for the ensuing academic year. Assistantships are not generally available to M.S. students on Plan B (non-thesis) programs, including those transferring from Plan A to Plan B.

Departmental graduate assistantship support will be limited to the equivalent of one calendar year for M.S. students, and two calendar years for Ph.D. students. The training grant fellowship and/or graduate school fellowship awards will generally have the same guidelines as the assistantship. To request possible extension of graduate assistantship support, students may petition the Department with an accompanying letter from the Major Professor. Assistantships will be terminated if the GPA is below 3.0. All courses including collateral will be used to compute the GPA. Continuation of department assistantship beyond the first year of support for Ph.D. student is based on the needs of the Department, the graduate student and the previous performance of the graduate student.

Students holding assistantships must register for course credits in accordance with the limits below:

Semester	Appointment	Minimum Credits			Maximum Credits excluding 899/999	
		Master	PhD Pre Comp	PhD* Post Comp	Master	PhD
Fall, Spring	Quarter-time	6	3	1	12	16
	Half-time	6	3	1	12	16
	Three-quarter time	3	3	1	8	8
Summer	All	3	3	1	None	none

* "Full-time status" for doctoral students is defined as a minimum of 1 credit for those students who: 1) Have successfully completed all comprehensive exams and are actively engaged in dissertation research; OR 2) Are doing department-approved off-campus fieldwork related to preparation of their dissertation (up to a maximum of three semesters).

For 1) above, College Dean's Offices must notify the Registrar's Office (Monica Klaver, 150 Admin) by sending a copy of the "Record of Comprehensive Examinations" form with all signatures, no later than 30 days

(60 days is preferable) **prior** to the beginning of the semester in which the one-credit minimum will be effective. No back-dating or back-notification will be permitted. The pre-comp minimum will be applied if the Registrar's office is not notified by the above-stated deadline.

For 2) above, the Dean's Office must notify the Registrar's Office (Monica Klaver, 150 Admin) of the student's name, PID, and Department no later than 30 days (60 days is preferable) prior to the beginning of the semester in which the department/school-approved off-campus fieldwork/research related to the dissertation will be effective and in which the one-credit full-time status is requested. No back-dating or back-notification will be permitted. The pre-comp minimum will be applied if the Registrar's office is not notified by the above-stated deadline.

Additional benefits to graduate students on assistantships include the following:

1. Exemption from out-of-state tuition.
2. Tuition for 9 Fall Semester, 9 Spring Semester, and 4 Summer Semester credits is exempted.
3. Eligibility to enroll in available health programs.
4. Matriculation and energy fees are waived.
5. Eligibility of campus parking permits.

The following meets University and Departmental definition for research assistantship levels:

Level 1 - Graduate students with less than one year of experience as a graduate assistant.

Level 2 - Graduate students with a master's degree or equivalent and/or two semesters' experience as a graduate assistant.

Level 3 - Six semesters of experience as a graduate RA/TA at MSU or equivalent; definition of which is made by the Department Chairperson.

FSHN policy for change in status to level 3: Graduate students with a master's degree or equivalent and at least four semesters' experience as a graduate assistant (or equivalent experience at the faculty level). FSHN has not differentiated this policy between TA and RA position status.

The change to Level 3 becomes effective the term following the successful completion of the comprehensive exam. The Record of Comprehensive Exam must be approved by the Department Chairperson prior to the last day of finals each semester.

If for some reason the exam is taken too late or signatures cannot be obtained to meet approval by the Department Chairperson by the last day of finals, the change to Level 3 will not take effect until a semester later (i.e. two semesters - If Record of Comprehensive Examination is approved too late Fall Semester, the level change would not take place until Summer Semester).

3.8. The Research Project

The research project for a thesis (Plan A) or a special problem (Plan B) is normally selected by the student in conference with his/her Major Professor. The project is usually one that contributes to a research area for which the Major Professor has funds available to support the graduate student research project.

It is strongly recommended that the student conduct a preliminary literature review to ascertain the state of the art before in-depth laboratory or field experiments are planned.

Space for the project and use of research laboratory facilities will be arranged, when necessary, by the Major Professor.

3.9. Policy on Authorship

1. Authorship- A person claiming authorship of a scholarly publication must have met all of the following criteria;
 - a. Substantial participation in conception and design of the study, development of methodologies, or in analysis and interpretation of data;
 - b. Approval of the version of the manuscript to be submitted for publication;
 - c. Ability to explain and defend methodology and data pertinent to their specific contributions to the study in public or scholarly settings.
2. Acknowledgment - Contributions that do not justify authorship should be acknowledged separately in the notes to the manuscript. These may include general supervision of a research group, assistance in obtaining funding, or technical support.
3. Honorary Authorship - A claim of authorship by, or assignment of authorship to, persons who may have been associated in some way with a study but do not meet the criteria in item 1 may constitute an unethical research practice.
4. Allocation of credit and order of authorship - A senior scientist is generally defined as the person who initiates and oversees a project, supervises and advises the junior researchers, and makes intellectual contributions to the project. In the case of graduate student thesis or dissertation research, the senior scientist is usually the student's Major Professor.

There is no general consensus on author order on scientific papers (Food Technol., 1989). A report by the National Academy of Sciences (NAS, 1995) states that "in many fields, the earlier a name appears in the list of authors, the greater the implied contribution, but conventions differ greatly among disciplines and among research groups." Sometimes the scientist with the greatest name recognition is listed first, whereas in other fields the research leader's name is always last. In some disciplines, supervisor's names rarely appear on papers, while in others the professor's name appears on almost every paper that comes out of the lab. Some research groups and journals avoid these decisions by simply listing authors alphabetically (NAS, 1995). Junior researchers may be listed as coauthors or even senior authors, depending on the work and arrangements within the research team (NAS, 1995). It is the responsibility of the senior scientist to assure that the contributions of study participants, both colleagues and students, are properly recognized.

Scientific research is a continuous, ever changing process of discovery, much larger than a single paper; as such, it is often impossible to establish a list of authors and order of authors when a project is initiated. Thus, the general publication policy of each senior scientist/faculty member should be discussed openly with all

researchers (both colleagues and students) at the outset of a project (see Appendix C for Authorship Designation Form). Before writing the manuscript, the faculty member should discuss author order with all authors.

5. Plagiarism - Plagiarism is the use of ideas or words of another person without giving appropriate credit (NAS, 1995). The expropriation of another author's text and the presentation of it as one's own, constitutes plagiarism. Plagiarism, in turn, constitutes misconduct in scholarship under University policies and procedures. Plagiarism in scholarly projects should be reported to one's Chairperson, dean, or the University Intellectual Integrity Officer.
6. Disputes Over Authorship and Plagiarism - Disagreements over authorship, e.g. who has a right to be an author or the order of authorship, and plagiarism should be resolved by the senior scientist in collegial consultation with the other authors. When resolution cannot be reached by this process, the person bringing forth the dispute should arrange with GAC and the Department Chairperson for arbitration by a knowledgeable and disinterested third party acceptable to all the authors. If the authors cannot agree on a mutually acceptable arbitrator, then the Vice President for Research and Graduate Studies shall appoint an arbitrator. During the arbitration process all the authors are expected to refrain from unilateral actions that may damage the authorship interests and rights of the other authors.
7. Accountability - Every author listed on a publication is presumed to have approved the final version of the manuscript. Each author is responsible for the integrity of the research being reported. Each author should denote approval of the final manuscript in writing using the departmental form: FSHN Authorship Designation. This requirement is waived if a manuscript is submitted to a journal requiring sign-off by all authors as part of the submission process.
8. Distribution - This policy should be distributed to all new faculty, graduate students and research staff in the department.
9. Student review of departmental file – Students may make a formal request to the Department Chairperson to review the accuracy of their departmental file in the presence of a graduate secretary. This request should be made in writing to the Department Chair with a copy to the Director of Graduate Studies; the letter will be entered into his/her file. All filed material must remain within the departmental office and cannot be photocopied or altered in any way.

References

Holmes, Z.A. 1989. Roles and attitudes of authors regarding multiple authorship of papers in Journal of Food Science. Food Technol. 43(5): 94.

National Academy of Sciences, 1995, "*On Being a Scientist: Responsible Conduct in Research*," National Academy Press, Washington, DC.

3.10. Other Degree Requirements

Performance. If a student's performance and/or progress does not meet departmental requirements, he/she shall be notified by the Department Chairperson. Where the deficiencies endanger the student's status in a degree program, he/she shall be promptly informed. A graduate student will be dismissed if his/her cumulative GPA falls below 3.0 for three consecutive semesters.

Annual Reports. The Graduate Student Annual Report form will become a permanent record of accomplishment and will be maintained in the graduate student's departmental file. *The Graduate Student Annual Report must be submitted to the Departmental Office each year irrespective of the type of appointment.* The Annual

Report is due on May 15th of each year. Include the grade report and a brief (1 page) summary of research accomplishments and guidance committee meetings. Important: Submit your completed form to your Major Professor and committee members for their comments and signature. The form should then be provided to the Graduate Secretary in the Departmental office for review and final approval by the Director of Graduate Studies. Assistantship appointments cannot be processed unless the Annual Report has been received by the Departmental office.”

Annual Graduate Review for Nutrition students. All nutrition students (all M.S. plan A, plan B, and all Ph.D.) will undergo an annual review of research progress. The purpose of this meeting is to assist the student in maintaining progress and in developing their full research potential. This review provides the student an opportunity to update all nutrition research faculty in their research area on research progress, and to discuss their data with faculty. The review supplements ongoing interactions between the student and the Major Professor, guidance committee, lab group discussions, and other activities designed to enhance professional development; the review does not take the place of these important activities. Graduate students can obtain additional information from their advisers.

Each nutrition graduate student will receive notice of the review schedule and information about the review several months prior to the scheduled review. The result of the review will be signed by the student and the faculty on the Graduate Committee and will be placed in the student’s file.

3.11. General Policies

Purchases for Projects. Many items can be obtained directly from MSU University Stores and Biochemistry Stores. University Stores items are listed in the MSU Stores Catalog which is available either from the Major Professor or from the Department main office.

Supplies from MSU University Stores and Biochemistry Stores must have the approval of the Major Professor who will indicate the account which is to be charged. A copy of the charge form must be returned to the Major Professor.

MSU University Stores may have an open account with off-campus sources for items not carried in stock. It is necessary to check with MSU Open Orders before obtaining items from such sources.

Students must have the approval of the Major Professor, and an appropriate account number, prior to ordering supplies. Supplies from off-campus which require a requisition must be obtained by filling out a form obtained from the Major Professor.

A large amount of scientific equipment is available in the Department. Such equipment is assigned to specific staff members for supervision and maintenance. Approval for its use should be initiated by the graduate student with the approval of his/her Major Professor. The staff member in charge of the equipment may request a minimum transfer of funds to cover the use of supplies and operational costs. Students using scientific equipment should be sure they know how to operate instruments before attempting to use them. The high cost of scientific equipment necessitates careful, informed use.

Computers. The use of computers in graduate research is strongly encouraged. Proper use of computers is expected and required of all graduate students. Details of the University policy on Acceptable Use should be reviewed using information posted at <http://www.msu.edu/au/>.

Statistics Consultation. The Statistical Consultation Service is a free service provided by MSU through the Department of Statistics and Probability (3-7177), the College of Agriculture and Natural Resources

(http://www.fw.msu.edu/orgs/canr_big/sop.htm), and the Computer Center. Services include assistance in designing experiments from a statistical viewpoint, choice of appropriate statistical techniques and information on available statistical programs.

Thesis/Dissertation Typing. Graduate students are responsible for the typing and cost of typing of the graduate thesis - no reimbursement will be made from departmental funds or from grants. Staff in the Department will not type any thesis during official working hours.

University Vehicles. University vehicles are available to the graduate student for research-associated uses. Permission for use is contingent upon the approval of a properly filled out travel request. Travel request forms are available from your Major Professor's office. Graduate students may be authorized to use University vehicles to travel to a conference in another state. Approval of the Provost is required if the destination is greater than 500 miles one way from MSU. University vehicle insurance protects only the University, not the passengers. An occupant of a University vehicle injured in an accident would have to sue the University to collect damages from this insurance.

Copy and Fax Machine. Use of copy and fax machines in offices is restricted and policies vary concerning their use and page charges. Students should check with their Major Professor to determine the policy in their office. The copy and fax machine in Room 201 is for Department business only and requires permission from the Major Professor prior to use.

Telephones. Telephones are not provided in graduate offices, but are available in nearby rooms. No personal long distance calls may be made from these phones. Local personal calls should be kept at a minimum as local calls are charged to the Department.

Libraries. Theses of students completing their degrees in the Department of Food Science and Human Nutrition are maintained in the Main Library, and are available on-line. A large number of books and journals are maintained by the Main Library for graduate students' use. Additional references are located in the Animal Science, Chemistry, Biology/Biophysics, and Clinical Center Library.

Keys. Entrance doors to the building are open between 7:00 a.m. - 6:00 p.m. weekdays. After hours and weekends, access to the building will require an electronic keycard, which also serves as your ID. Requests for building access should be made in the Department Office. Keys for the assigned graduate office can be checked out from the Department Office. Keys to other areas can be obtained from the Department Office upon approval of the professor who is in charge of the room. No deposit is required for FSHN Faculty, Staff or Students. Lost keys will result in a \$10 charge per key.

Mailbox. You will be assigned a mailbox. It is the graduate student's responsibility to check the mailbox frequently (daily, if possible). The mailbox should not be utilized for personal mail.

Leave of Absence. Students who plan to take a leave of absence for one semester should inform the Department Chairperson in writing (with a copy to the Major Professor). A checkout sheet must be completed prior to leaving. Students taking a leave of absence for longer than three consecutive semesters, including summer, will need to follow university procedures for reinstatement.

Vacation. Students on graduate assistantships are given 10 work days vacation per year plus those official scheduled holidays given to faculty and staff. Currently there is no stated policy at the University, College or Department level regarding vacations for graduate students who are not on assistantships. Graduate students should consult with their Major Professor regarding the length and timing of vacations.

4. M.S. DEGREE IN FOOD SCIENCE

FSHN Graduate Students are encouraged to use the forms in Appendix C to track their progress.

4.1. Admission

Admission to the M.S program is based on a detailed review of undergraduate (and, where applicable, previous graduate) performance, Graduate Record Examination scores, letters of recommendation, previous research experience, and a letter of intent and research interests. Applicants should have a minimum grade-point average of 3.0, grades of 3.0 or above in science and mathematics courses, and proficiency in written and spoken English. Scores on the GRE General Test are required, along with a personal letter of intent and letters of reference. Applicants should have taken undergraduate courses in physics, inorganic chemistry, organic chemistry, biochemistry, mathematics through integral calculus, and microbiology. In addition, it is desirable for students to have taken upper level undergraduate courses in food processing, food chemistry, food microbiology, food engineering, and nutrition. In cases where students entering the masters program with one or more deficiencies in undergraduate coursework, appropriate collateral courses to take as a part of the degree requirement will be recommended by the Graduate Admissions Committee to the student, their advisor and guidance committee.

4.2. Course, seminar, research, and residency requirements

The M.S. degree may be obtained under Plan A (with a thesis) or Plan B (without a thesis). Either program consists of at least 30 total credits. 16 credits of the M.S. student's program shall be at the 800 level or above, of which two FSC lecture courses (3 credit each; excluding FSC 892, 890, 899, and 894) are required. In addition, all M.S. students are required to present one seminar for credit (FSC 892); students may re-enroll in FSC 892 for a maximum of 2 credits toward the M.S. degree.

For Plan A students at least 6 and no more than 10 credits will be research in FSC 899. All M.S. students are required to present one seminar for credit (FSC 892). In order to obtain a broad, well-rounded background in Food Science, students should have taken as undergraduates or will take during the M.S. degree program at least one upper-level Food Science course in each of the following areas: Food Processing, Food Engineering, Food Chemistry, Food Safety, and Food Microbiology.

A minimum of 6 credits in the degree program must be earned on campus in order to meet the University residency requirement. Full-time students, including those on 1/2-time assistantships, should expect to complete the M.S. degree in two years. University policy limits the total time for completion to five years.

Any student on Plan B wishing to transfer to Plan A or vice versa should complete a Change of Status form and write a letter to the Department Chairperson indicating the reasons for requesting the change. The request will be referred to the Department Graduate Affairs Committee for evaluation and recommendation. The Department Chairperson will then report the decision to the student.

4.3. Guidance Committee

The Major Professor in consultation with the student shall recommend to the Department Chairperson a Guidance Committee by completing and submitting the form "Appointment of Guidance Committee". A graduate guidance committee should be composed of at least three (3) MSU regular faculty members as defined by the Faculty Handbook; at least two (2) of which shall be from this Department and the third member can come from Food Science and Human Nutrition Department or any other Department. Adjunct faculty and

others can participate on the committee as long as their number does not exceed the number of regular MSU faculty. The completed "Appointment of Guidance Committee" form must be submitted to the Department Chairperson (with consultation with GAC) for approval at least two weeks prior to the first committee meeting.

Prior to the completion of 14 credits towards the M.S. degree, students must submit an approved Master's degree program plan signed by all members of the Guidance Committee to the graduate secretary. Copies of the form are available from the Major Professor or the Departmental office. The Guidance Committee will meet to approve the program plan and should meet as often as necessary to review the student's research progress.

Students pursuing a Plan A Masters must prepare a thesis proposal to be approved by their Guidance Committee prior to initiation of the research. Format for proposals may vary, but should include background, justification, objectives, and protocols for the proposed studies.

4.4. Examination

Examination on the thesis and related areas consists of a public seminar (Plan A) followed by a closed oral exam (Plans A and B), approximately one to two hours in length. Committee members may ask additional questions of Plan A M.S. candidates who anticipate continuing for the Ph.D. degree in FSHN at MSU to help determine the student's competence to be successful at the Ph.D. level. Passing the oral exam requires a majority vote by the committee, and the committee will judge whether the student may continue for a Ph.D. Students failing the exam are allowed retake within 3 months.

4.5. Thesis Preparation

Thesis format should follow University regulations (a manual is available at <http://grad.msu.edu/format.htm>). In consultation with the Major Professor, a leading journal in the field should be used as a format for references. All Plan A M.S. students must submit a successfully revised draft of the defended thesis to the Major Professor before the Final Certification for Graduation is approved by the Major Professor. One unbound copy of the thesis, plus one additional copy of its title page and abstract, must be delivered to the Graduate School by the end of the semester of graduation. The Graduate School will forward the thesis to University Microfilms to be microfilmed and bound. The Major Professor and committee members should also receive bound copies of the thesis. All charges for preparing graphs, charts, typing, and binding of the thesis are to be paid by the student.

4.6. Final Semester Procedures

All students must complete a Graduation Information Sheet at the Registrar's Office, 150 Administration when registering for the final semester of the graduate program at MSU. If a student fails to complete the work within the deadlines published in the Schedule of Courses and Calendar for that semester, but completes the requirements before the first day of classes for the next semester, no additional registration is required.

The Schedule of Courses and Calendar lists the deadlines pertaining to the thesis and/or oral exams for the graduating candidate for the semester in which graduation is expected. Students should familiarize themselves with the dates and meet the deadlines. Failure to comply with the above mentioned deadlines may delay graduation until the following semester.

4.7. Checkout and Final Certification

The Final Certification form will come directly to the Department from the Registrar's Office for completion. A checkout sheet should be obtained by the student through the Graduate Secretary. The student must complete the form before leaving campus.

4.8. Transfer from M.S. to Ph.D.

Plan A students who wish to transfer from a M.S. to a Ph.D. may petition the Department Chairperson for acceptance into a Ph.D. program. The petition should be accompanied by a letter of approval from the Major Professor, transcripts, and supporting letters from guidance committee. The petition will be referred to the Graduate Affairs Committee for their evaluation and recommendation. The Department Chairperson will then report the decision to the student.

4.9. Continuation from M.S. degree into the Ph.D. program

Plan A students who complete the M.S. degree in FSHN at MSU and are favorably recommended by the M.S. guidance committee to continue for Ph.D. studies should complete the "Request to Continue for a Ph.D. in Food Science and Human Nutrition" form obtained from the Graduate Secretary. Students who complete the M.S. degree in FSHN at MSU and who are not recommended for Ph.D. studies by the M.S. guidance committee must reactivate their file to be considered for admission into the Ph.D. program. Their file will be reviewed, together with all other applicants for graduate study, as part of the regular review process by the entire faculty at the next regularly scheduled review meeting.

Plan B M.S. candidates cannot directly enter into the Food Science Ph.D. program, but can submit an application to the department for acceptance into the Ph.D. program following the standard application procedures and timelines.

5. Ph.D. DEGREE IN FOOD SCIENCE

FSHN Graduate Students are encouraged to use the forms in Appendix C to track their progress.

5.1. Admission

Admission to the Ph.D. program is based on a detailed review of undergraduate (and, where applicable, previous graduate) performance, Graduate Record Examination scores, letters of recommendation, previous research experience, and a letter of intent and research interests. Applicants should have a minimum grade-point average of 3.0, grades of 3.0 or above in science and mathematics courses, and proficiency in written and spoken English. Scores on the GRE General Test are required, along with a personal letter of intent and letters of reference. Applicants should have taken undergraduate courses in physics, inorganic chemistry, and organic chemistry; biochemistry; mathematics through integral calculus, and microbiology. In addition, it is desirable for students to have taken upper level undergraduate courses in food processing, food chemistry, food microbiology food engineering, and nutrition. In cases where students entering the doctoral program with one or more deficiencies in undergraduate coursework, appropriate collateral courses to take as a part of the degree requirement will be recommended by the Graduate Admissions Committee to the student, their advisor and guidance committee.

5.2. Program of Study

In the course of studies for the Ph.D. degree, a student will undertake the following requirements:

1. Complete courses in the major and related fields as prescribed by his/her research guidance committee (see section 5.3.1 for details).
2. Conduct original research (see section 3.8 for details).
3. Pass the doctoral qualifying examination or appropriate coursework (see section 5.5.1 for details).
4. Pass the doctoral comprehensive examination (see section 5.5.2 for details).
5. Gain experience in teaching by assisting faculty in designated courses (see section 5.3.1 for details).
6. Prepare one or more first-authored, publishable manuscripts and, desirably, publish or at least submit these for publication (see section 5.5.3.1).
7. Prepare a dissertation (see section 5.8 for details).
8. Present her/his doctoral research at a public seminar and then pass a final oral examination in defense of the dissertation (see section 5.5.3 for details).

5.3. Requirements

5.3.1. Course Requirements

An individualized program of study formulated by the major professor and the research guidance committee in consultation with the candidate will be designed to ensure that the student will have comprehensive knowledge of the general field of Food Science, detailed knowledge of a specialized area in the field, and supportive knowledge of cognitive subjects. This minimum program (with possible additional courses specified by the research guidance committee) must include:

1. Four courses (3 credits each) at the 800 or 900 level, excluding topics and seminar courses, at least three of which are offered under FSC.
2. Participation in two semesters of seminar FSC 892 (1 credit) involving student presentations.
3. A course in research integrity (e.g., NSC 830) or enrollment in the “Responsible Conduct of Research” seminar series.

4. A course on writing a research proposal (at least 1 credit).
5. Participation in a graduate teaching orientation and at least 1 credit internship with an FSHN faculty on teaching

In consultation with their Major Advisor, members of the research guidance committee, and DGS, additional course work may be specified that will benefit the student's research as well as courses necessary to complete the Ph.D. core requirements (especially for students who have earned the M.S. degree in another field). A typical doctoral program contains 20 to 34 course credits to provide the desired breadth and depth of academic training for the student. A cumulative GPA of 3.0 must be maintained (exclusive of collateral and research credits).

5.3.2. Research Requirements.

For the Ph.D. degree in Food Science, 24 *research* credits are required beyond the M.S. degree.

5.3.3. Seminar Requirements

All Food Science Ph.D. students are required to present two seminars for credit (FSC 892). One of these seminars will be outside of the student's dissertation research area. The other seminar will be related to the student's dissertation research. Ph.D. candidates are also required to present a dissertation research proposal seminar and a final dissertation defense seminar (both without FSC 892 credit), both of which are open to the public.

5.3.4. Residency Requirements

One year of residence (defined as enrollment in courses offered and attended on campus) is required to meet the University residence requirement. One year of residence will be made up of two consecutive semesters involving the completion of at least 6 credits of graduate work per semester.

5.4. Guidance Committee

The Major Professor, in consultation with the student, shall recommend to the Department Chairperson for approval a Guidance Committee composed of at least four regular MSU faculty members, three of whom must be from this Department. The fourth member of the committee must be from another Department. Additional members can be from any MSU Department. Regular MSU faculty is defined in the MSU faculty handbook. Adjunct faculty and others may participate on graduate committees as long as the number of adjunct faculty and others does not exceed the number of regular MSU faculty.

The completed "Appointment of Guidance Committee" form must be submitted to the Department Chairperson (with consultation with GAC) for approval at least two weeks prior to the first committee meeting.

Within one calendar year after admission to the Ph.D. program, the Guidance Committee will meet and review his or her competency in subject matter and outline a research program. At that time, the Report of the Guidance Committee - Doctoral form detailing the doctoral program should be signed by the committee and submitted to the Department Chairperson.

Upon approval of the dissertation project outline, students should complete a research proposal for presentation and discussion at the oral comprehensive exam as outlined in Section 5.5.2. Additional meetings are to be held to consult on the student's research as deemed necessary by the Chairperson of the Guidance Committee and the student. Informal consultation between the student and individual members of the committee is encouraged.

5.5. Examinations

5.5.1. Qualifying Examination

The doctoral qualifying examination is a required component of the doctoral program at MSU. The purpose of the examination is to evaluate the student's ability to integrate and to apply knowledge obtained in the core courses recommended for the Ph.D. program to general problems in Food Science.

5.5.1.1. Content

Students should take the written examination within the first 12 months of their enrollment in the program. Administration of the exam is under control of all FSHN Food Science Faculty and is administered by the Director of Graduate Studies (see Section 5.5.1.3). The written examination (closed book, supplemental support materials may be provided as appropriate and at discretion of examining committee) is a general subject examination in three core areas of food science and is designed to evaluate the doctoral candidate's general knowledge and ability to apply fundamental concepts based on the knowledge obtained in the discipline. The three core competencies covered in three separate portions of the written examinations include: 1) Food Chemistry, 2) Food Microbiology, 3) Food Processing/Engineering. In any given year, all students will receive the same exam with the questions prepared by Food Science faculty members in their area of expertise. A series of review questions prepared by the faculty covering each of the three core areas will also be made available to students prior to the examination.

5.5.1.2. Waiver of written exam

Waivers for taking the various competency components for exam can be obtained by completion of the following courses at MSU with a grade of 3.0 or greater: (1) Food Microbiology Competency: FSC 440 Food Microbiology (3 cr); (2) Food Chemistry Competency: FSC 401 Food Chemistry (3 cr) and FSC 455 Food Analysis (3 cr); (3) Food Processing and Engineering Competency: FSC 325 Food Processing: Unit Operations (4 cr) AND FSC 429 Food Engineering (3 cr).

5.5.1.3. Schedule and Administration

The Written Food Science Qualifying Examination will be administered once per year in August. The Director of Graduate Studies will select two faculty members from each of the three core Food Science areas to prepare and submit general knowledge questions in their respective core areas. These two core-area faculty will be selected on a rotating basis so that each core area faculty member will have equal input into writing exam questions over time. However, every attempt will be made to avoid having faculty members submit or grade questions in cases when their own advisee is scheduled to take the examination. Additionally, the Director of Graduate Studies will, each year, select a faculty member from within the FSHN Food Science Faculty to arrange and preside at a meeting of all Food Science faculty where the general subject examination questions are selected and directions are prepared. This presiding faculty member will not have an advisee scheduled to take the examination. The three core-area subject examinations will be submitted to the Director of Graduate Studies at least one week before the scheduled examination date in August. The Director of Graduate Studies will then administer the examination to the Food Science Ph.D. candidates.

5.5.1.4. Preparation

In preparation for the comprehensive examination, students should have taken or should take one or more upper-level Food Science courses in the following three core areas: (1) Food Processing and Engineering, (2) Food Chemistry, and (3) Food Microbiology.

To assist the students in studying for the written general examination a file containing sample questions in each of the core areas will be available from the Director of Graduate Studies. These questions are to be used as a study guide and provide examples of the types of questions the student should expect on the general examination. It is recommended that the student obtain these questions as soon as approval has been granted to take the examination or after their first committee meeting. Approximately 4-6 weeks before the scheduled general subject examination, the presiding faculty member will arrange at least one session with the doctoral students to discuss the general expectations of candidates in these examinations.

5.5.1.5. Grading, Pass/Fail Criteria and Retake Policies

Faculty member(s) who submitted the questions will grade their own questions within 2 weeks. Grading will be numerical, adjusted for the weight assigned to each question. The final grades for the general examinations will be based on a percentage. The grade on each of the core examination components must be at least 75% to pass. Students can address deficiency in a competency in one of two ways. The failed examination component must be retaken within 6 months or by achieving a 3.0 in appropriate coursework for the competency area (see Waiver of Written Exam). Only one retake will be allowed. Failing any part of the exam twice or failing the exam and course will result in dismissal of the student from the Ph.D. program. Copies of all examination questions will be filed by the Director of Graduate Studies in the Department Office. The students' answers to these examinations will be kept in departmental files as long as the student is in the program (MSU regulation, three years). Copies will be made available for independent review, if necessary.

5.5.2. Comprehensive Examination (Research Proposal Defense)

The purpose of the comprehensive examination is to evaluate the student's preparation and knowledge in his/her research emphasis area to ascertain the candidate's potential to communicate ideas, design experiments, conduct research and interpret data – qualifications necessary for successful completion of a Ph.D. dissertation. The Comprehensive Examination is under the control of the Food Science student's Guidance Committee (see section 5.5.2.2 for details) and must be in compliance with the regulations and guidelines of the MSU graduate Program and the Department of FSHN.

5.5.2.1. Schedule and proposal

By the end of the first semester of the third year, the student will prepare and defend a written research proposal. The proposal should be in the current USDA-NRI or NIH R21 format and include the following elements: Summary/Abstract, Specific Aims/Hypothesis, Background, Rationale/Significance, Methods, Expected Results and Pitfalls, Facilities/Equipment, Biosketches, and Budget. **HARD COPY** of the proposal will be distributed to the student's Guidance Committee at least 14 days prior to the proposal defense. All sources of information ordinarily available to research workers may be utilized in the preparation of the proposal, including any of the major professor's own grant proposal(s) that he/she may wish to make available to the student. Prior to undertaking the writing, the student should engage in dialogue with the major professor(s) and guidance committee members regarding the feasibility of particular experiments. However, the spirit of the examination is that the written proposal must reflect the student's own ideas and thinking. While it is impossible (and inappropriate) to remove the influence of the major professor from the conception and definition of the student's project, the background and impetus for the research, the rationale of approach, the hypotheses to be tested, the experimental designs, and the anticipated results and significance of the work,

should all be a product of the student's imagination and effort. Furthermore, it is the student's responsibility to meet accepted standards of original writing, attribution of source material, spelling and grammar.

5.5.2.2. Format and guidelines for closed questioning

The Director of Graduate Studies, in consultation with GAC faculty members, will appoint a member of the GAC Faculty (other than the student's Major Professor or advisory committee members) to preside at the oral examination. This appointee will ensure that the student's breadth of knowledge is challenged in an appropriate and equitable fashion that is consistent with departmental standards. The student will present his/her dissertation research proposal in the form of an open seminar. Immediately following the presentation, the Ph.D. candidate will meet with the committee to defend the proposed research in private. The student will be evaluated on his/her ability to defend the proposed research, design experiments, interpret data, and communicate in related areas of food science research. The criteria used by the committee to render a decision include an assessment of the candidate's ability to identify an important research problem, knowledge in the chosen area of interest and related areas, and his/her ability to design experiments for the solution of the problem and to effectively communicate these ideas both orally and in writing. In addition, questions relating the proposal to pertinent coursework and the broader area of Food Science will be asked. The student's Major Professor will attend the proposal defense. However, the Major Professor will not ask questions, but will be available for clarification of technical points should the need arise. The Major Professor and the departmental appointee will participate in the discussions following the defense and will vote.

5.5.2.3. Outcomes of oral comprehensive examination

In arriving at a decision, the oral comprehensive examination committee will evaluate the student's performance on the written proposal, seminar presentation and closed questioning. Three outcomes are possible:

1. **PASS** – requires a unanimous vote of the examination committee. The student is thus admitted to official Ph.D. candidacy.
2. **FAIL** – requires a unanimous vote of the examination committee. If this decision is reached, no remediation is available and the student will be recommended for dismissal from the doctoral program. The student may continue toward an M.S. degree if the major professor(s) concurs. Upon completion of the M.S., the student may reapply to the Ph.D. program. At this time, the M.S. guidance committee will evaluate the student's potential for a doctoral degree and decide whether to recommend the student for acceptance into the Food Science doctoral program.
3. **DELAY** - If the examination committee chooses neither of the above options and can identify a deficiency in the student's performance that is believed to be correctable within a reasonably short period of time, it will detail, both verbally and in a letter to the student, the nature of the problem(s) and the requirements for successful remediation. A time limit, not to exceed three months, will be set. If, in the opinion of the committee, the student fails to adequately remediate the deficiency in the specified time frame, he/she will be recommended for dismissal from the doctoral program. If the student is judged to have remediated it successfully, she/he will then have passed the exam. Situations that may warrant a "DELAY" include: (i) a serious pitfall in an otherwise satisfactory proposal that can be remedied by revision of an experimental design or method of analysis; (ii) the failure to recognize, deal with or interpret a likely alternative outcome(s) of an experiment and its implication; (iii) a poorly written or poorly documented section of the proposal requiring substantial revision; and (iv) the lack of sufficient understanding of a method of data acquisition (e.g. an assay procedure) or analysis (e.g. appropriate statistical method) viewed as a critical component of the research. The "DELAY" should not be used to remedy a serious deficiency in fundamental knowledge that should have been attained by the student through required coursework. A remediation timeframe exceeding three months must be approved by the GAC.

5.5.3. Final Examination

5.5.3.1. Manuscript requirement

All Ph.D. candidates are required to prepare one or more publishable manuscripts based on the dissertation and provide them to the Major Professor prior to scheduling the final examination.

5.5.3.2. Scheduling

A HARD COPY draft of the dissertation approved by the Major Professor must be provided to the members of the Guidance Committee at least 14 days prior to the scheduled final exam. The candidate must be registered during the semester in which the final examination is taken. An announcement is posted two weeks ahead of the final examination and distributed to all faculty.

5.5.3.3. Seminar and Exam

As part of the examination, the student presents an open seminar. Immediately after the public presentation and open discussion, the oral examination on the thesis will be conducted by the research guidance committee. The student's Major Professor will preside at the dissertation defense and ensure it is conducted in an appropriate and equitable fashion that is consistent with departmental standards. The student's Major Professor will participate in questioning as well as post-exam discussions and will vote. When the Ph.D. final examination is passed, the MSU form (Record of Completion of Requirements for Doctoral Degree) should be completed and signed by the Major Professor and members of the Guidance Committee and distributed.

5.5.3.4. Outcomes of the final examination

In arriving at a decision, the final examination committee will evaluate the student's performance on the written dissertation, seminar presentation and closed questioning. Three outcomes are possible:

1. **PASS** – requires a unanimous vote of the examination committee. .
2. **FAIL** – requires a unanimous vote of the examination committee. If this decision is reached, no remediation is available and the student will be recommended for dismissal from the doctoral program. The student may continue toward an M.S. degree if the major professor(s) concurs.
3. **DELAY** - If the examination committee chooses neither of the above options and can identify a deficiency in the student's performance that is believed to be correctable within a reasonably short period of time, it will detail, both verbally and in a letter to the student, the nature of the problem(s) and the requirements for successful remediation. A time limit, not to exceed three months, will be set. A remediation timeframe exceeding three months must be approved by the GAC.

5.6. Time Limit

According to the university requirements, the comprehensive exam must be completed within 5 years, and all requirements for the Ph.D. degree must be completed within 8 years of a student's first enrollment for doctoral degree credit. Any exceptions must be approved by the Chairperson, Dean of the relevant College and the Dean of The Graduate School.

5.7. Final Semester Procedures

The student must fill out a diploma card when registering for the final semester of the graduate program at MSU. If the student does not complete the doctoral degree requirements within the deadlines published in the Schedule of Courses and Calendar for that semester, but completes the requirements before the first day of classes for the next semester, no additional registration is required.

5.8. Dissertation Preparation

Dissertation format should follow University regulations (a manual is available at the Graduate School Office). A major journal in the field might be used as a format (i.e., J. Food Science, J. Nutrition). All charges for preparing graphs, charts, typing and binding of the dissertation are paid by the student.

One unbound copy of the dissertation, plus one additional copy of its title page and abstract, must be delivered to the Graduate School. The Graduate School will forward the thesis to University Microfilms to be microfilmed and bound. In addition, one bound copy of the abstract and dissertation shall be presented to the Department, or the Department must be provided with a receipt indicating that University Microfilms is reproducing and binding the thesis and sending it to the Department before certification approval. The Major Professor should also receive a bound copy of the abstract and dissertation.

5.9. Checkout and Final Certification

A checkout sheet should be obtained by the student through the Graduate Secretary. The student should complete the form before leaving campus. The Final Certification form will come directly to the Department from the Registrar's Office for completion.

6. M.S. DEGREE IN HUMAN NUTRITION

FSHN Graduate Students are encouraged to use the forms in Appendix C to track their progress.

6.1. Admission

Admission to the M.S program is based on a detailed review of undergraduate (and, where applicable, previous graduate) performance, Graduate Record Examination scores, letters of recommendation, previous research experience, and a letter of intent and research interests. Applicants should have a minimum grade-point average of 3.0, grades of 3.0 or above in science and mathematics courses, and proficiency in written and spoken English. Scores on the GRE General Test are required, along with a personal letter of intent and letters of reference. Applicants should have taken undergraduate courses in nutrition, chemistry, biology, upper-level physiology and biochemistry, statistics, organic chemistry, and a social science. In addition, it is desirable for students to have taken upper-level undergraduate courses in macronutrients, micronutrients, nutrition and human development, and community nutrition. In cases where students entering the masters program with one or more deficiencies in undergraduate coursework, appropriate collateral courses to take as a part of the degree requirement will be recommended by the Graduate Admissions Committee to the student, their advisor and guidance committee.

6.2 Course, seminar, research and residency requirements

The M.S. degree may be obtained under Plan A (with a thesis) or Plan B (without a thesis). Either program consists of at least 30 total credits. 16 credits of the M.S. student's program shall be at the 800 level or above, of which two HNF lecture courses (3 credit each; excluding HNF 890, 892, 894, and 899) are required. In addition, all M.S. students are required to present one seminar for credit (HNF 892); students may re-enroll in HNF 892 for a maximum of 2 credits toward the M.S. degree. For Plan A students at least 6 and no more than 10 credits will be research in HNF 899. In order to obtain a broad, well-rounded background in Nutritional Science, students should have taken as undergraduates or will take during the M.S. degree program upper level courses in the following areas: macronutrients, micronutrients, nutrition and human development, community nutrition, biochemistry, and physiology.

A minimum of 6 credits in the degree program must be earned on campus in order to meet the University residency requirement. Full-time students, including those on 1/2-time assistantships, should expect to complete the M.S. degree in two years. University policy limits the total time for completion to five years.

Any student on Plan B wishing to transfer to Plan A or vice versa should complete a Change of Status form and write a letter to the Department Chairperson indicating the reasons for requesting the change. The request will be referred to the Department Graduate Affairs Committee for evaluation and recommendation. The Department Chairperson will then report the decision to the student.

6.3. Guidance Committee

The Major Professor in consultation with the student shall recommend to the Department Chairperson a Guidance Committee by completing and submitting the form "Appointment of Guidance Committee". A graduate guidance committee should be composed of at least three (3) MSU regular faculty members as defined by the Faculty Handbook; at least two (2) of which shall be from this Department and the third member can come from Food Science and Human Nutrition Department or any other Department. Adjunct faculty and others can participate on the committee as long as their number does not exceed the number of regular MSU faculty. The completed "Appointment of Guidance Committee" form must be submitted to the Department Chairperson (with consultation with GAC) for approval at least two weeks prior to the first committee meeting.

Prior to the completion of 14 credits towards the M.S. degree, students must submit an approved Master's degree program plan signed by all members of the Guidance Committee to the graduate secretary. Copies of the form are available from the Major Professor or the Departmental office. The Guidance Committee will meet to approve the program plan and should meet as often as necessary to review the student's research progress.

Students pursuing a Plan A Masters must prepare a thesis proposal to be approved by their Guidance Committee prior to initiation of the research. Format for proposals may vary, but should include background, justification, objectives, and protocols for the proposed studies.

6.4. Examination

Examination on the thesis and related areas consists of a public seminar (Plan A) followed by a closed oral exam (Plans A and B), approximately one to two hours in length. Committee members may ask additional questions of Plan A M.S. candidates who anticipate continuing for the Ph.D. degree in FSHN at MSU to help determine the student's competence to be successful at the Ph.D. level. Passing the oral exam requires a majority vote by the committee, and the committee will judge whether the student may continue for a Ph.D. Students failing the exam are allowed retake within 3 months.

6.5. Thesis Preparation

Thesis format should follow University regulations (a manual is available at <http://grad.msu.edu/format.htm>). In consultation with the Major Professor, a leading journal in the field should be used as a format for references. All Plan A M.S. students must submit a successfully revised draft of the defended thesis to the Major Professor before the Final Certification for Graduation is approved by the Major Professor. One unbound copy of the thesis, plus one additional copy of its title page and abstract, must be delivered to the Graduate School by the end of the semester of graduation. The Graduate School will forward the thesis to University Microfilms to be microfilmed and bound. The Major Professor and committee members should also receive bound copies of the thesis. All charges for preparing graphs, charts, typing, and binding of the thesis are to be paid by the student.

6.6. Final Semester Procedures

All students must complete a Graduation Information Sheet at the Registrar's Office, 150 Administration when registering for the final semester of the graduate program at MSU. If a student fails to complete the work within the deadlines published in the Schedule of Courses and Calendar for that semester, but completes the requirements before the first day of classes for the next semester, no additional registration is required.

The Schedule of Courses and Calendar lists the deadlines pertaining to the thesis and/or oral exams for the graduating candidate for the semester in which graduation is expected. Students should familiarize themselves with the dates and meet the deadlines. Failure to comply with the above mentioned deadlines may delay graduation until the following semester.

6.7. Checkout and Final Certification

The Final Certification form will come directly to the Department from the Registrar's Office for completion. A checkout sheet should be obtained by the student through the Graduate Secretary. The student must complete the form before leaving campus.

6.8. Transfer from M.S. to Ph.D.

Plan A students who wish to transfer from a M.S. to a Ph.D. may petition the Department Chairperson for acceptance into a Ph.D. program. The petition should be accompanied by a letter of approval from the Major Professor, transcripts, and supporting letters from guidance committee. The petition will be referred to the Graduate Affairs Committee for their evaluation and recommendation. The Department Chairperson will then report the decision to the student and Major Professor.

6.9. Continuation from M.S. degree into the Ph.D. program

Plan A students who complete the M.S. degree in FSHN at MSU and are favorably recommended by the M.S. guidance committee to continue for Ph.D. studies should complete the “Request to Continue for a Ph.D. in Food Science and Human Nutrition” form obtained from the Graduate Secretary. Students who complete the M.S. degree in FSHN at MSU and who are not recommended for Ph.D. studies by the M.S. guidance committee must reactivate their file to be considered for admission into the Ph.D. program. Their file will be reviewed, together with all other applicants for graduate study, as part of the regular review process by the entire faculty at the next regularly scheduled review meeting.

Plan B M.S. candidates cannot directly enter into the Human Nutrition Ph.D. program, but can submit an application to the department for acceptance into the Ph.D. program following the standard application procedures and timelines.

7. Ph.D. DEGREE IN HUMAN NUTRITION

FSHN Graduate Students are encouraged to use the forms in Appendix C to track their progress.

7.1. Admission

Admission to the Ph.D. program is based on a detailed review of undergraduate (and, where applicable, previous graduate) performance, Graduate Record Examination scores, letters of recommendation, previous research experience, and a letter of intent and research interests. Applicants should have a minimum grade-point average of 3.0, grades of 3.0 or above in science and mathematics courses, and proficiency in written and spoken English. Scores on the GRE General Test are required, along with a personal letter of intent and letters of reference. Applicants should have taken undergraduate courses in nutrition, chemistry, biology, upper-level physiology and biochemistry, statistics, organic chemistry, and a social science. In addition, it is desirable for students to have taken upper level undergraduate courses in macronutrients, micronutrients, nutrition and human development, and community nutrition. In cases where students entering the doctoral program with one or more deficiencies in undergraduate coursework, appropriate collateral courses to take as a part of the degree requirement will be recommended by the Graduate Admissions Committee to the student, their advisor and guidance committee.

7.2. Program of Study

In the course of studies for the Ph.D. degree, a student will undertake the following requirements:

1. Complete courses in the major and related fields as prescribed by his/her research guidance committee (see section 7.3.1 for details).
2. Conduct original research (see section 3.8 for details).
3. Pass the doctoral qualifying examination or appropriate coursework (see section 7.5.1 for details).
4. Pass the doctoral comprehensive examination (see section 7.5.2 for details).
5. Gain experience in teaching by assisting faculty in designated courses (see section 7.3.1 for details).
6. Prepare one or more first-authored, publishable manuscripts and, desirably, publish or at least submit these for publication (see section 7.5.3.1).
7. Prepare a dissertation (see section 7.8 for details).
8. Present her/his doctoral research at a public seminar and then pass a final oral examination in defense of the dissertation (see section 7.5.3 for details).

7.3. Requirements

7.3.1. Course Requirements. An individualized program of study formulated by the major professor and the research guidance committee in consultation with the candidate will be designed to ensure that the student will have comprehensive knowledge of the general field of Human Nutrition, detailed knowledge of a specialized area in the field, and supportive knowledge of cognitive subjects. This minimum program (with possible additional courses specified by the research guidance committee) must include:

1. Four courses (3 credits each) at the 800 or 900 level, excluding seminar courses, at least three of which are offered under HNF.
2. Participation in two semesters of seminar HNF892 (1 credit) involving student presentations.
3. A course in research integrity (e.g., NSC 830) or enrollment in the “Responsible Conduct of Research” seminar series.
4. A course on writing a research proposal (at least 1 credit).

5. Participation in a graduate teaching orientation and at least 1 credit internship with an FSHN faculty on teaching

In consultation with their Major Advisor, members of the research guidance committee, and DGS, additional course work may be specified that will benefit the student's research as well as courses necessary to complete the Ph.D. core requirements (especially for students who have earned the M.S. degree in another field). A typical doctoral program contains 20 to 34 course credits to provide the desired breadth and depth of academic training for the student. A cumulative GPA of 3.0 must be maintained (exclusive of collateral and research credits).

7.3.2. Research Requirements.

For the Ph.D. degree in Human Nutrition, 24 *research* credits are required beyond the M.S. degree.

7.3.3. Seminar Requirements

All Human Nutrition Ph.D. students are required to present two seminars for credit (HNF 892). One of these seminars will be outside of the student's dissertation research area. The other seminar will be related to the student's dissertation research. Ph.D. candidates are also required to present a dissertation research proposal seminar and a final dissertation defense seminar (both without HNF 892 credit), both of which are open to the public.

7.3.4. Residency Requirements

One year of residence (defined as enrollment in courses offered and attended on campus) is required to meet the University residence requirement. One year of residence will be made up of two consecutive semesters involving the completion of at least 6 credits of graduate work per semester.

7.4. Guidance Committee

The Major Professor, in consultation with the student, shall recommend to the Department Chairperson for approval a Guidance Committee composed of at least four regular MSU faculty members, three of whom must be from this Department. The fourth member of the committee must be from another Department. Additional members can be from any MSU Department. Regular MSU faculty is defined in the MSU faculty handbook. Adjunct faculty and others may participate on graduate committees as long as the number of adjunct faculty and others does not exceed the number of regular MSU faculty. The completed "Appointment of Guidance Committee" form must be submitted to the Department Chairperson (with consultation with GAC) for approval at least two weeks prior to the first committee meeting.

Within one calendar year after admission to the Ph.D. program, the Guidance Committee will meet and review his or her competency in subject matter and outline a research program. At that time, the Report of the Guidance Committee - Doctoral form detailing the doctoral program should be signed by the committee and submitted to the Department Chairperson.

Upon approval of the dissertation research project outline, students should complete a research proposal for discussion by the oral comprehensive exam as outlined in Section 7.5.2. Additional meetings are to be held to consult on the student's research as deemed necessary by the Chairperson of the Guidance Committee and the student. Informal consultations between the student and individual members of the committee are encouraged.

7.5. Examinations

7.5.1. Qualifying Examination

The doctoral qualifying examination is a required component of the doctoral program at MSU. The purpose of the examination is to evaluate the student's ability to integrate and to apply knowledge obtained in the core courses recommended for the Ph.D. program to general problems in Human Nutrition.

7.5.1.1. Content

Students should take the written examination within the first 12 months of their enrollment in the program. Administration of the exam is under control of all FSHN Human Nutrition Faculty and is administered by the Director of Graduate Studies (see Section 7.5.1.3.). The written examination (closed book, supplemental support materials may be provided as appropriate and at discretion of examining committee) is a general subject examination in four core areas of Human Nutrition and is designed to evaluate the doctoral candidate's general knowledge and ability to apply fundamental concepts based on the knowledge obtained in the discipline. The four core competencies covered in four separate portions of the written examinations include: 1) Carbohydrates, Lipids, and Proteins, 2) Vitamins and Minerals, 3) Nutrition and Human Development, and 4) Community Nutrition. In any given year, all students will receive the same exam with the questions prepared by Human Nutrition faculty members in their area of expertise. Previous years' exam questions will be made available to students prior to the examination.

7.5.1.2. Waiver of written exam

Waivers for taking the various competency components for exam can be obtained by completion of the following courses at MSU with a grade of 3.0 or greater: (1) HNF 461: Advanced Human Nutrition: Carbohydrates, Lipids, and Proteins, (3 cr); 2) HNF 462: Advanced Human Nutrition: Vitamins and Minerals; (3 cr); 3) HNF 453: Nutrition and Human Development (3 cr); and 4) HNF 375: Community Nutrition (2 cr) and HNF 377: Community Nutrition and Action (2 cr).

7.5.1.3. Schedule and Administration

The Written Human Nutrition Qualifying Examination will be administered once per year in August. The Director of Graduate Studies will select two faculty members from each of the four core Human Nutrition areas to prepare and submit general knowledge questions in their respective core areas. These two core-area faculty will be selected on a rotating basis so that each core area faculty member will have equal input into writing exam questions over time. However, every attempt will be made to avoid having faculty members submit or grade questions in cases when their own advisee is scheduled to take the examination. Additionally, the Director of Graduate Studies will, each year, select a faculty member from within the FSHN Human Nutrition Faculty to arrange and preside at a meeting of all Human Nutrition faculty where the general subject examination questions are selected and directions are prepared. This presiding faculty member will not have an advisee scheduled to take the examination. The three core-area subject examinations will be submitted to the Director of Graduate Studies at least one week before the scheduled examination date in August. The Director of Graduate Studies will then administer the examination to the Human Nutrition Ph.D. candidates.

7.5.1.4. Preparation

In preparation for the comprehensive examination, students should have taken or should take one or more upper-level Human Nutrition courses at the 400 level or higher in the following four core areas: 1)

Carbohydrates, Lipids, and Proteins, 2) Vitamins and Minerals, 3) Nutrition and Human Development, and 4) Community Nutrition.

To assist the students in studying for the written general examination a file containing sample questions in each of the core areas will be available from the Director of Graduate Studies. These questions are to be used as a study guide and provide examples of the types of questions the student should expect on the general examination. It is recommended that the student obtain these questions as soon as approval has been granted to take the examination or after their first committee meeting. Approximately 6-8 wk. before the scheduled general subject examination, the presiding faculty exam mentor will arrange at least one session with the doctoral students to discuss the general expectations of candidates in these examinations.

7.5.1.5. Grading, Pass/Fail Criteria and Retake Policies

Faculty member(s) who submitted the questions will grade questions their own questions within 2 weeks. Grading will be numerical, adjusted for the weight assigned to each question. The final grades for the general examinations will be based on a percentage. The grade on the core examination components must be at least 75% average for the two cores combined: 1) Carbohydrates, Lipids, and Proteins, and 2) Vitamins and Minerals cores, and at least a 75% average for the two cores combined: 3) Nutrition and Human Development and 4) Community Nutrition cores to pass. Students can address deficiency in a competency in one of two ways. The failed examination component must be retaken within 6 months or by achieving a 3.0 in appropriate coursework for the competency area (see Waiver of Written Exam). Only one retake will be allowed. Failing any part of the exam twice or failing the exam and course will result in dismissal of the student from the Ph.D. program. Copies of all examination questions will be filed by the Director of Graduate Studies in the Department Office. The students' answers to these examinations will be kept in departmental files as long as the student is in the program (MSU regulation, three years). Copies will be made available for independent review, if necessary.

7.5.2. Comprehensive Examination (Research Proposal Defense)

The purpose of the comprehensive examination is to evaluate the student's preparation and knowledge in his/her research emphasis area to ascertain the candidate's potential to communicate ideas, design experiments, conduct research and interpret data -- qualifications necessary for successful completion of a Ph.D. dissertation. The Comprehensive Examination is under the control of the Human Nutrition student's Guidance Committee (see section 7.5.2.2) and must be in compliance with the regulations and guidelines of the MSU Graduate Program and the Department of FSHN.

7.5.2.1. Schedule and proposal

By the end of the first semester of the third year, the student will prepare and defend a written research proposal. The proposal should be in the current USDA- NRI or NIH R21 format and include the following elements: Summary/Abstract, Specific Aims/Hypothesis, Background, Rationale/Significance, Methods, Expected Results and Pitfalls, Facilities/Equipment, Biosketches, and Budget. This HARD COPY of the proposal will be distributed to the student's Guidance Committee at least 14 days prior to the proposal defense. All sources of information ordinarily available to research workers may be utilized in the preparation of the proposal, including any of the major professor's own grant proposal(s) that he/she may wish to make available to the student. Prior to undertaking the writing, the student should engage in dialogue with the major professor(s) and guidance committee members regarding the feasibility of particular experiments. However, the spirit of the examination is that the written proposal must reflect the student's own ideas and thinking. While it is impossible (and inappropriate) to remove the influence of the major professor from the conception and definition of the student's project, the background and impetus for the research, the rationale of approach, the

hypotheses to be tested, the experimental designs, and the anticipated results and significance of the work, should all be a product of the student's imagination and effort. Furthermore, it is the student's responsibility to meet accepted standards of original writing, attribution of source material, spelling and grammar.

7.5.2.2. Format and guidelines for closed questioning

The Director of Graduate Studies, in consultation with the GAC faculty members, will appoint a member of the FSHN GAC Faculty (other than the student's Major Professor or advisory committee members) to preside at the oral examination. This appointee will ensure that the student's breadth of knowledge is challenged in an appropriate and equitable fashion that is consistent with departmental standards. This appointee will ensure that the student's breadth of knowledge is challenged in a appropriate and equitable fashion that is consistent with departmental standards. The student will present his/her dissertation research proposal in the form of an open seminar. Immediately following the presentation, the Ph.D. candidate will meet with the committee to defend the proposed research in private. The student will be evaluated on his/her ability to defend the proposed research, design experiments, interpret data, and communicate in related areas of human nutrition research. The criteria used by the committee to render a decision include an assessment of the candidate's ability to identify an important research problem, knowledge in the chosen area of interest and related areas, and his/her ability to design experiments for the solution of the problem and to effectively communicate these ideas both orally and in writing. In addition, questions relating the proposal to pertinent coursework and the broader area of Human Nutrition will be asked. The student's Major Professor will attend the proposal defense. However, the Major Professor will not ask questions, but will be available for clarification of technical points should the need arise. The Major Professor and the departmental appointee will participate in the discussions following the defense and will vote.

7.5.2.3. Outcomes of oral comprehensive examination

In arriving at a decision, the oral comprehensive examination committee will evaluate the student's performance on the written proposal, seminar presentation and closed questioning. Three outcomes are possible:

1. **PASS** – requires a unanimous vote of the examination committee. The student is thus admitted to official Ph.D. candidacy.
2. **FAIL** – requires a unanimous vote of the examination committee. If this decision is reached, no remediation is available and the student will be recommended for dismissal from the doctoral program. The student may continue toward an M.S. degree if the major professor(s) concurs. Upon completion of the M.S., the student may reapply to the Ph.D. program. At this time, the M.S. guidance committee will evaluate the student's potential for a doctoral degree and decide whether to recommend the student for acceptance into the Human Nutrition doctoral program.
3. **DELAY** - If the examination committee chooses neither of the above options and can identify a deficiency in the student's performance that is believed to be correctable within a reasonably short period of time, it will detail, both verbally and in a letter to the student, the nature of the problem(s) and the requirements for successful remediation. A time limit, not to exceed three months, will be set. If, in the opinion of the committee, the student fails to adequately remediate the deficiency in the specified time frame, he/she will be recommended for dismissal from the doctoral program. If the student is judged to have remediated it successfully, she/he will then have passed the exam. Situations that may warrant a "DELAY" include: (i) a serious pitfall in an otherwise satisfactory proposal that can be remedied by revision of an experimental design or method of analysis; (ii) the failure to recognize, deal with or interpret a likely alternative outcome(s) of an experiment and its implication; (iii) a poorly written or poorly documented section of the proposal requiring substantial revision; and (iv) the lack of sufficient understanding of a method of data acquisition (e.g. an assay procedure) or analysis (e.g.

appropriate statistical method) viewed as a critical component of the research. The “DELAY” should not be used to remedy a serious deficiency in fundamental knowledge that should have been attained by the student through required coursework. A remediation timeframe exceeding three months must be approved by the GAC.

7.5.3. Final Examination

7.5.3.1. Manuscript requirement

All Ph.D. candidates are required to prepare one or more publishable manuscripts based on the dissertation and provide them to the Major Professor prior to scheduling the final examination.

7.5.3.2. Scheduling

A HARD COPY draft of the dissertation approved by the Major Professor must be provided to the members of the Guidance Committee at least 14 days prior to the scheduled final exam. The candidate must be registered during the semester in which the final examination is taken. An announcement is prepared two weeks ahead of the final examination by the student and distributed by the Graduate Secretary to faculty in FSHN and other relevant departments.

7.5.3.3. Seminar and Exam

As part of the examination, the student presents an open seminar. Immediately after the public presentation and open discussion, the oral examination on the thesis will be conducted by the research guidance committee. The student’s Major Professor will preside at the dissertation defense and ensure it is conducted in an appropriate and equitable fashion that is consistent with departmental standards. The student’s Major Professor will participate in questioning as well as post-exam discussions and will vote. When the Ph.D. final examination is passed, the MSU form (Record of Completion of Requirements for Doctoral Degree) should be completed and signed by the Major Professor and members of the Guidance Committee and distributed.

7.5.3.4. Outcomes of the final examination

In arriving at a decision, the final examination committee will evaluate the student’s performance on the written dissertation, seminar presentation and closed questioning. Three outcomes are possible:

1. **PASS** – requires a unanimous vote of the examination committee.
2. **FAIL** – requires a unanimous vote of the examination committee. If this decision is reached, no remediation is available and the student will be recommended for dismissal from the doctoral program. The student may continue toward an M.S. degree if the major professor(s) concurs.
3. **DELAY** - If the examination committee chooses neither of the above options and can identify a deficiency in the student's performance that is believed to be correctable within a reasonably short period of time, it will detail, both verbally and in a letter to the student, the nature of the problem(s) and the requirements for successful remediation. A time limit, not to exceed three months, will be set. A remediation timeframe exceeding three months must be approved by the GAC.

7.6. Time Limit

According to the university requirements, the comprehensive exam must be completed within 5 years, and all requirements for the Ph.D. degree must be completed within 8 years of a student's first enrollment for doctoral

degree credit. Any exceptions must be approved by the Chairperson, Dean of the relevant College and the Dean of The Graduate School.

7.7. Final Semester Procedures

The student must fill out a diploma card when registering for the final semester of the graduate program at MSU. If the student does not complete the doctoral degree requirements within the deadlines published in the Schedule of Courses and Calendar for that semester, but completes the requirements before the first day of classes for the next semester, no additional registration is required.

7.8. Dissertation Preparation

Dissertation format should follow University regulations (a manual is available at the Graduate School Office). A major journal in the field might be used as a format (i.e., J. Food Science, J. Nutrition). All charges for preparing graphs, charts, typing and binding of the dissertation are paid by the student.

One unbound copy of the dissertation, plus one additional copy of its title page and abstract, must be delivered to the Graduate School. The Graduate School will forward the thesis to University Microfilms to be microfilmed and bound. In addition, one bound copy of the abstract and dissertation shall be presented to the Department, or the Department must be provided with a receipt indicating that University Microfilms is reproducing and binding the thesis and sending it to the Department before certification approval. The Major Professor should also receive a bound copy of the abstract and dissertation.

7.9. Checkout and Final Certification

A checkout sheet should be obtained by the student through the Graduate Secretary. The student should complete the form before leaving campus. The Final Certification form will come directly to the Department from the Registrar's Office for completion.

8. SPECIFIC RESPONSIBILITIES

Certain duties and responsibilities are provided in this section of the handbook for quick reference. These are referenced from the “Guidelines for Graduate Student Advising and Mentoring Relationships” found at <http://msu.edu/user/gradschl/all/ris04relations.pdf>.

The responsibilities of the academic unit include:

- Preparing and maintaining a graduate handbook that includes the information outlined in the Graduate Handbook Template¹, as well as academic unit and college requirements for degree completion
- Providing opportunities for graduate students to interact with a wide array of colleagues from within and outside the University through such activities as speaker series, colloquia, and other formal and informal events
- Creating opportunities for graduate students to become familiar with the various forms of scholarship in the field
- Sharing responsibility with guidance committees and faculty advisors in fostering the professional and career development of graduate students, for example, by providing venues for honing professional writing and presentation skills and organizing seminars on such issues as ethics, professional integrity and grantsmanship

The responsibilities of the chair or director of the academic unit and/or director of graduate studies include:

- Knowing University and academic unit rules, procedures and policies applicable to graduate study, research, and creative activities (including those in *Academic Programs*², *Graduate Student Rights and Responsibilities*³ or *Medical Student Rights and Responsibilities*⁴ and *Academic Freedom for Students at Michigan State University*⁵) and ensuring that they are followed in the academic unit
- Distributing to incoming graduate students the academic unit’s Graduate Handbook
- Organizing orientation sessions for incoming graduate students
- Ensuring that required courses and examinations are scheduled on a regular basis, thereby enabling graduate students to make timely progress in their degree programs
- Providing advice on matters such as course selection until a permanent faculty advisor and guidance committee are selected, or appointing a committee or temporary advisor to assume that role

- Facilitating selection of a faculty advisor and guidance committee and facilitating changes of faculty advisor and/or guidance committee should this become necessary
- Monitoring at least annually the progress of students in the graduate program and the quality of their research or creative activity, as well as the standards and fairness of examinations
- Monitoring the performance of faculty advisors and guidance committees to ensure that graduate students are receiving appropriate mentoring
- Working toward fair resolution of conflicts between graduate students and faculty

The responsibilities of the faculty advisor include:

- Ensuring that graduate students receive information about requirements and policies of the graduate program
- Advising graduate students on developing a program plan, including appropriate course work, research or creative activity, and on available resources
- Advising graduate students on the selection of a thesis or dissertation topic with realistic prospects for successful completion within an appropriate time frame and on the formation of a guidance committee
- Providing training and oversight in creative activities, research rigor, theoretical and technical aspects of the thesis or dissertation research, and in professional integrity
- Encouraging graduate students to stay abreast of the literature and cutting-edge ideas in the field
- Helping graduate students to develop professional skills in writing reports, papers, and grant proposals, making professional presentations, establishing professional networks, interviewing, and evaluating manuscripts and papers
- Providing regular feedback on the progress of graduate students toward degree completion, including feedback on research or creative activities, course work, and teaching, and constructive criticism if the progress does not meet expectations
- Helping graduate students develop into successful professionals and colleagues, including encouraging students to participate and disseminate results of research or creative activities in the appropriate scholarly or public forums

- Facilitating career development, including advising graduate students on appropriate job and career options, as well as on the preparation of application materials for appropriate fellowship, scholarship, and other relevant opportunities
- Writing letters of reference for appropriate fellowship, scholarship, award, and job opportunities
- Providing for supervision and advising of graduate students when the faculty advisor is on leave or extended absence

The responsibilities of the guidance committee include:

- Advising graduate students on course work, research, or creative activities
- Providing at least annually feedback and guidance concerning progress toward the degree
- Administering exams in a fair and professional manner
- Reviewing the thesis or dissertation in a timely, constructive and critical manner

The responsibilities of the graduate student include:

- Learning and adhering to University and academic unit rules, procedures, and policies applicable to graduate study and research or creative activities, including those outlined in *Academic Programs*², *Graduate Student Rights and Responsibilities*³ or *Medical Student Rights and Responsibilities*⁴, and *Academic Freedom for Students at MSU*⁵
- Meeting University and academic unit requirements for degree completion
- Forming a guidance committee that meets University requirements^{2,3}, as well as requirements that are outlined in the Graduate Handbook of the academic unit
- Following disciplinary and scholarly codes of ethics in course work, thesis or dissertation research, and in creative activities
- Practicing uncompromising honesty and integrity according to University and federal guidelines in collecting and maintaining data
- Seeking regulatory approval for research in the early stages of thesis or dissertation work where applicable
- Keeping the faculty advisor and guidance committee apprised on a regular basis of the progress toward completion of the thesis or dissertation.

9. FORMS AND LETTERS

9.1. Forms or Letters Needed For Masters in Food Science

Guidance Committee Appointment Form
Masters Proposed Academic Program
Change in Admission Status (Provisional to Regular) (letter to Chairperson)
Masters Program Change
Report of Oral or Written Examination for Masters Degree
Check-Out Sheet

9.2. Forms or Letters Needed for Masters in Human Nutrition

Guidance Committee Appointment Form
Masters Proposed Academic Program
Change in Admission Status (Provisional to Regular) (letter to Chairperson)
Masters Program Change
Report of Oral or Written Examination for Masters Degree
Check-Out Sheet

9.3. Forms or Letters Needed for Ph.D. in Food Science

Guidance Committee Appointment Form
Ph.D. Program Plan - Report of the Guidance Committee
Doctoral Program Change
Record of Comprehensive Examination
Record of Dissertation and Oral Exam Requirements
Check-Out Sheet

9.4. Forms or Letters Needed for Ph.D. in Human Nutrition

Guidance Committee Appointment Form
Ph.D. Program Plan - Report of the Guidance Committee
Doctoral Program Change
Record of Comprehensive Examination
Record of Dissertation and Oral Exam Requirements
Check-Out Sheet

APPENDIX A: GRADUATE STUDENT FUNDING OPPORTUNITIES

A. Department Scholarships/Fellowships Available Annually (Spring)

- 1) **J. Robert Brunner Fund for Food Science and Human Nutrition Research** - Ph.D. 1/2 time assistantship in food processing or analytical research
- 2) **LeRoy and Dorothy Dugan Food Chemistry Fellowship Endowment** - Preference to U.S. graduate student(s) with research in the field of lipid chemistry.
- 3) **Beth and Holly Fryer Endowed Scholarship** - Award to undergraduate in Food and Nutrition or graduate in Human Nutrition with minimum GPA of 3.2.
- 4) **Gerber Endowment Fund in Pediatric Nutrition and Food Science** - Award for undergraduate students in FSHN or Ph.D. graduate students in FSHN with emphasis on a career in nutrition and food science and pediatrics
- 5) **The Max Gonzenbach Fund for Student Mentoring and Research** - Award to undergraduate student in FSHN or graduate student in FSHN with research project emphasis on "enhanced understanding of the associations between dairy-based foods, nutrition and health."
- 6) **LeAnn B. Goodwin Endowed Graduate Research Fellowship** - Research fellowships to graduate students with research in newly emerging areas of nutrition
- 7) **H.A.M.M. Scholarship** - Award to a graduate student in FSHN with preference given to students studying in the area of foodservice management with financial need a secondary consideration.
- 8) **John Harvey Kellogg Fellowship for Human Health and Nutrition Research** - Competitive application process to award graduate assistantships for Ph.D. students in Nutrition.
- 9) **Erland Kondrup Fellowship** - Fellowship to graduate student(s) in FSHN with interest in dairy processing or dairy chemistry, to enhance professional growth. Funds used for professional meeting attendance, research expenditures.
- 10) **Olaf and Clarice Mickelsen Human Nutrition Endowed Fellowship** - Funds to support a graduate student in FSHN majoring in Human Nutrition
- 11) **Lois Gordon Ridley Endowed Scholarships/Fellowships** - Award to a FSHN graduate or undergraduate student at Junior status. Preference given to students with financial need.
- 12) **Rachel A. Schemmel Graduate Student Endowed Research Scholarship** - Award to a Nutrition graduate student in FSHN or Food Science graduate student with B.S. degree in Nutrition or Dietetics. Must complete one semester and submit approved research proposal or current publication.
- 13) **Stiver Endowed Fellowship** - Award to a graduate student in FSHN with preference for financial need.

B. Graduate School Funding Opportunities

- 1) **Dissertation Completion Fellowships** - Twenty fellowships are available annually to allow students to devote full time to writing the dissertation with the goal that the dissertation will be completed during the tenure of the fellowship. Selection of fellowship winners will be made by a student's college.
- 2) **Graduate Office Fellowship Funds** - Approximately \$2.1 million in Graduate Office Fellowship (GOF) funds are available through the thirteen colleges with graduate programs. The Associate Dean for Graduate Education of each college decides how these funds are dispersed to departments/units.
- 3) **Emergency/Discretionary Fellowship Funding** - The Graduate School has limited funding available for graduate students for unusual or unforeseen emergency/discretionary expenses. This funding is only for graduate students pursuing a degree program. Please be aware that emergency/discretionary funds are provided on a one-time only basis. Awards are contingent upon eligibility, endorsements, availability of funds, and, in most cases, cost-sharing by the student's college and department.

C. Other Funding Opportunities

- 1) **Institute of Food Technologists** - IFT supports and encourages outstanding research in food science and technology through more than 30 graduate scholarships totaling over \$80,500. Deadline in February. Additional information at <http://www.ift.org/cms/?pid=1000438>
- 2) **Institute of Food Technologists Great Lakes Section** – M.S. and Ph.D. Achievement Awards, Diversity Scholarship and Active Student Member Scholarship available to eligible students. Deadline in January. Additional information at <http://www.ift.org/sections/greatlakes/students.htm>
- 3) **American Dietetic Association** - Scholarships awarded by the ADAF are generally for ADA members enrolled in internship, undergraduate and graduate programs. One application form is used for all ADAF scholarships. The number of scholarships available and their dollar amounts vary from year to year. Information is normally posted in September. Additional information at http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/career_394_ENU_HTML.htm
- 4) **International Studies and Programs** – Award information at <http://www.isp.msu.edu/students/funding/>
- 5) **Women and International Development Program (WID)** – Award information at <http://www.wid.msu.edu/forstudents/opportunities.htm>

D. Travel Funding Opportunities

- 1) **P. Vincent Hegarty Education Enhancement Endowment Fund** –Funding available for travel to professional meetings. Students presenting receive \$400 and students attending receive \$200. Applications available in 204 Trout FSHN.
- 2) **The MSU College of Agriculture & Natural Resources** - Submit application plus letter from Major Professor to 121 Agriculture Hall.
- 3) **The MSU College of Natural Science** - Submit application plus letter from Major Professor to 103 Natural Science.

- 4) **The Institute of Food Technologists Great Lakes Section** - GLS-IFT will be providing travel funds to students involved in activities related with IFT (quiz bowl, product development, meetings, etc). Applications available in 204 Trout FSHN. Additional information at <http://www.ift.org/sections/greatlakes/students.htm>
- 5) **Graduate Student International Travel Grant (GSITG)** - International Studies and Programs (ISP) offers small travel grants to graduate students at MSU who are engaged in research which deals with international issues. All applications must be processed through the Graduate School. Additional information at <http://www.isp.msu.edu/students/funding/>

APPENDIX B

Department of Food Science and Human Nutrition Authorship Designation

I have reviewed a draft of the manuscript entitled
authored by
to be submitted to
and find it acceptable for publication.

Signed:

Date:

APPENDIX C: GRADUATE STUDENT WORKSHEETS

M.S. DEGREE IN HUMAN NUTRITION GRADUATE STUDENT WORKSHEET (page 1 of 2)

This worksheet is intended to help monitor your graduate program. It is not intended as a comprehensive record of your program, rather it is to ensure meeting the minimum requirements as outlined in the Food Science and Human Nutrition Graduate Student Handbook. It does not substitute for a thorough reading and understanding of the Graduate Student Handbook or the MSU Graduate Studies Catalog.

The following are required of all M.S. students:

- _____ a. Obtain a graduate student handbook.
- _____ b. Select courses in consultation with Major Professor.
- _____ c. Register for at least 1 credit hour per semester (6 credits/semester is required if on 1/4-1/2 time assistantship).
- _____ d. Maintain at least a 3.0 grade point average.
- _____ e. File an annual report, due on May 15th of each year.

International Students (before the first term):

- _____ a. Complete English Proficiency Exams.
- _____ b. Obtain clearance from the International Students Office.
- _____ c. Obtain health insurance.

Provisional Students:

- _____ Submit a change in admission status form after requirements specified in letter of admission have been met.

Guidance Committee Requirements:

At least three MSU regular faculty members; minimum of two from FSHN; third member may be from FSHN or another department.

- 1. _____
- 2. _____
- 3. _____
- 4. _____

- _____ Submit the Guidance Committee Appointment Form and Masters Proposed Academic Program, signed by all members of the Guidance Committee, before completion of 14 semester credits toward the M.S. degree.
- _____ Thesis proposal submitted to Guidance Committee before starting research.
- _____ Appropriate approvals received from the University Committee on Research Involving Animals and Human Subjects prior to starting research as specified in Graduate Studies Catalog.

**M.S. DEGREE IN HUMAN NUTRITION
GRADUATE STUDENT WORKSHEET
(page 2 of 2)**

Course Program:

Prerequisite/Collateral Courses (See section 6.1)

- _____ Nutrition
- _____ Chemistry
- _____ Biology
- _____ Upper-level physiology
- _____ Upper-level biology
- _____ Statistics
- _____ Organic chemistry
- _____ Social science

Course Requirements (See section 6.2)

- _____ Two 800 level or above HNF lecture courses
- _____ HNF 892 Nutrition Seminar (1 credit)

Total # of credits (A minimum of 30 credits must be completed, with at least 16 at 800 level or above. Plan A masters includes 6-10 research credits.)

- _____ 400 level
- _____ 800 level or above (must be 16 credits or greater)
- _____ HNF 899 (6-10 credits)
- = _____ Total # of credits

Final Term/Graduation:

- _____ Check Schedule of Courses and Calendar to determine deadlines for graduation.
- _____ Must fill out Graduation Information Sheet at the Registrar's Office for final semester.
- _____ Obtain departmental check out sheet for information on thesis distribution requirements, etc.
- _____ Follow university regulations for thesis format.
- _____ Prepare manuscript(s) based on thesis.
- _____ Schedule final oral examination.
- _____ Prepare abstract for thesis (150 words or less)
- _____ Request final certification form completed by Major Professor.
- _____ Distribute copies of thesis for Graduate School, college, department and Major Professor; plus an additional copy of the abstract for the Graduate School and the College.
- _____ Complete degree within five years.

Continue on at MSU for Ph.D.:

Option A: Approval of committee members at final oral exam.

- _____ Complete and submit the "Request to Continue for a PhD in Food Science and Human Nutrition" form.

Option B: Reapplication to program.

- _____ Submit an application to the department for acceptance into the PhD program following the standard application procedures and timelines.

**PH.D. DEGREE IN HUMAN NUTRITION
GRADUATE STUDENT WORKSHEET
(page 1 of 2)**

This worksheet is intended to help monitor your graduate program. It is not intended as a comprehensive record of your program, rather it is to ensure meeting the minimum requirements as outlined in the Food Science and Human Nutrition Graduate Student Handbook. It does not substitute for a thorough reading and understanding of the Graduate Student Handbook and the MSU Graduate Studies Catalog.

The following are required of all Ph.D. students:

- _____ a. Select a Major Professor.
- _____ b. Obtain graduate handbook.
- _____ c. Select guidance committee.
- _____ c. Select courses in consultation with Major Professor.
- _____ d. Register for at least 1 credit hour per semester (6 credits/term is required if on an assistantship).
- _____ e. Maintain at least a 3.0 grade point average.
- _____ f. File an annual report, due on May 15th of each year.

International Students (before the first semester):

- _____ a. Complete English Proficiency Exams.
- _____ b. Obtain approval from the International Students Office.
- _____ c. Obtain health insurance.

Provisional Students:

- _____ Submit a change in admission status form to Department Chair after requirements specified in letter of admission have been met.

Guidance Committee Requirements:

At least four MSU regular faculty members; minimum of three from FSHN; minimum of one from another department.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

- _____ File Selection of Ph.D. Guidance Committee form with Chairperson and College at least two weeks prior to first committee meeting.
- _____ After completing 14 semester credits or no later than two semesters, a Guidance Committee meeting shall be held to review competencies and research proposal.
- _____ Appropriate approvals received from the University Committee on Research Involving Human Subjects prior to starting research as specified in Graduate Studies Catalogue.
- _____ Guidance Committee Report Form submitted.
- _____ Dissertation Proposal submitted to Guidance Committee before starting research.

**PH.D. DEGREE IN HUMAN NUTRITION
GRADUATE STUDENT WORKSHEET
(page 2 of 2)**

Course Program:

Prerequisite/Collateral Courses (See section 7.1)

- Nutrition
- Chemistry
- Biology
- Upper-level physiology
- Upper-level biology
- Statistics
- Organic chemistry
- Social science

Course Requirements (See section 7.2)

- Four 800 level or above lecture courses (3 must be HNF)
- HNF 892 Nutrition Seminar (2 credits)
- Course in research integrity
- Course on writing a research proposal (at least 1 credit)
- Teaching experience (at least 1 credit)

A minimum of 24 research credits must be completed.

Comprehensive Exam (See section 7.5):

- Pass the qualifying examination or appropriate coursework (HNF 461, 462, 453, 375 and 377)
- Pass the doctoral comprehensive examination
- Record of Completion of Comprehensive Exams filed by Major Professor

Final Term/Graduation:

- Students should check Schedule of Courses to determine deadlines for graduation.
- Must fill out a Graduation Information Sheet at the Registrar's Office for final semester.
- Obtain departmental check out sheet for information on dissertation distribution requirements, etc.
- Submit draft of dissertation to committee prior to scheduling final exam.
- Prepared manuscript(s) based on dissertation.
- Schedule dissertation seminar.
- Schedule final oral examination plus departmental seminar.
- Dissertation format follows university regulations.
- Abstract of dissertation prepared following university guidelines.
- Final certification form completed by Major Professor.
- Distribute copies of thesis for Graduate School, college, department and Major Professor; plus an additional copy of the abstract for the Graduate School and the College.
- Time limit specified in Graduate Studies Catalog has been met.

**M.S. DEGREE IN FOOD SCIENCE
GRADUATE STUDENT WORKSHEET
(page 1 of 2)**

This work sheet is intended to help monitor your graduate program. It is not intended as a comprehensive record of your program, rather it is to ensure meeting the minimum requirements as outlined in the Food Science and Human Nutrition Graduate Student Handbook. It does not substitute for a thorough reading and understanding of the Graduate Student Handbook or the MSU Graduate Studies Catalog.

The following are required of all M.S. students:

- _____ a. Select a Major Professor.
- _____ b. Obtain graduate handbook.
- _____ c. Select courses in consultation with Major Professor.
- _____ d. Register for a minimum of 1 credit hour per semester (6 credits/semester is required if on assistantship).
- _____ e. Maintain at least a 3.0 grade point average.
- _____ f. File an annual report, due May 15th of each year.

International Students (before the first term):

- _____ a. Complete English Proficiency Exams.
- _____ b. Obtain clearance from the International Students Office.
- _____ c. Obtain health insurance.

Provisional Students:

- _____ Change in Admission Status Memo - after requirements specified in letter of admission have been met.

Guidance Committee Requirements:

At least three MSU regular faculty members: minimum of two from FSHN; the third member may be from FSHN or another department

- 1. _____
- 2. _____
- 3. _____
- 4. _____

- _____ File Selection of Ph.D. Guidance Committee form with Chairperson and College at least two weeks prior to first committee meeting.
- _____ After completing 14 semester credits or no later than two semesters, a Guidance Committee meeting shall be held to review competencies and research proposal.
- _____ Appropriate approvals received from the University Committee on Research Involving Human Subjects prior to starting research as specified in Graduate Studies Catalogue.
- _____ Guidance Committee Report Form submitted.
- _____ Dissertation Proposal submitted to Guidance Committee before starting research.

**M.S. DEGREE IN FOOD SCIENCE
GRADUATE STUDENT WORKSHEET
(page 2 of 2)**

Course Program:

Prerequisite/Collateral Courses (See section 4.1)

- _____ Physics
- _____ Inorganic chemistry
- _____ Organic Chemistry
- _____ Biochemistry
- _____ Mathematics (through integral calculus)
- _____ Microbiology
- Upper level courses
- _____ Food processing
- _____ Food chemistry
- _____ Food microbiology
- _____ Food engineering
- _____ Nutrition

Course Requirements (See section 4.2)

- _____ Two 800 level or above FSC lecture courses
- _____ FSC 892 Nutrition Seminar (1 credit)

Total # of credits (A minimum of 30 credits must be completed, with at least 16 at 800 level or above. Plan A masters includes 6-10 research credits.)

- _____ 400 level
- _____ 800 level or above (must be 16 credits or greater)
- _____ FSC 899 (6-10 credits)
- = _____ Total # of credits

Final Term/Graduation:

- _____ Students should check Schedule of Courses and Calendar to determine deadlines for graduation.
- _____ Must fill out a Graduation Information Sheet at the Registrar's Office for final semester
- _____ Obtain departmental check out sheet for information on thesis distribution requirements, etc.
- _____ Thesis format follows university regulations.
- _____ Schedule final oral examination.
- _____ Abstract for thesis prepared (150 words or less).
- _____ Final certification form completed by Major Professor.
- _____ Distribute copies of thesis for Graduate School, department and Major Professor, plus an additional copy of the abstract for the Graduate School.
- _____ Prepare manuscript(s) from thesis for publication.
- _____ Degree completed within five years.

Continue on at MSU for Ph.D.:

Option A: Approval of committee members at final oral exam.

- _____ Complete and submit the "Request to Continue for a PhD in Food Science and Human Nutrition" form.

Option B: Reapplication to program.

- _____ Submit an application to the department for acceptance into the PhD program following the standard application procedures and timelines.

**PH.D. DEGREE IN FOOD SCIENCE
GRADUATE STUDENT WORKSHEET
(page 1 of 2)**

This work sheet is intended to help monitor your graduate program. It is not intended as a comprehensive record of your program, rather it is to ensure meeting the minimum requirements as outlined in the Food Science and Human Nutrition Graduate Student Handbook. It does not substitute for a thorough reading and understanding of the Graduate Student Handbook and the MSU Graduate Studies Catalog.

The following are required of all Ph.D. students:

- _____ a. Select a Major Professor.
- _____ b. Obtain graduate handbook.
- _____ c. Select courses in consultation with Major Professor.
- _____ d. Register for at least 1 credit hour per semester (6 credits/semester is required if on assistantship).
- _____ e. Maintain at least a 3.0 grade point average.
- _____ f. File an annual report, due on May 15th of each year.

International Students (before the first term):

- _____ a. Complete English Proficiency Exams.
- _____ b. Obtain clearance from the International Students Office.
- _____ c. Obtain health insurance.

Provisional Students:

- _____ Submit a change in Admission status memo to Department Chair after requirements specified in letter of admission have been met.

Guidance Committee Requirements:

At least four MSU regular faculty members; minimum of three from FSHN; minimum of one from a department other than FSHN

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

- _____ File Selection of Ph.D. Guidance Committee form with Chairperson and College at least two weeks prior to first committee meeting.
- _____ After completing 14 semester credits or no later than two semesters, a Guidance Committee meeting shall be held to review competencies and research proposal.
- _____ Appropriate approvals received from the University Committee on Research Involving Human Subjects prior to starting research as specified in Graduate Studies Catalogue.
- _____ Guidance Committee Report Form submitted.
- _____ Dissertation Proposal submitted to Guidance Committee before starting research.

PH.D. DEGREE IN FOOD SCIENCE
GRADUATE STUDENT WORKSHEET (page 2 of 2)

Course Program:

Prerequisite/Collateral Courses (See section 5.1)

- Physics
- Inorganic chemistry
- Organic Chemistry
- Biochemistry
- Mathematics (through integral calculus)
- Microbiology
- Upper level courses
- Food processing
- Food chemistry
- Food microbiology
- Food engineering
- Nutrition

Course Requirements (See section 5.2)

- Four 800 level or above lecture courses (3 must be FSC)
- FSC 892 Nutrition Seminar (2 credits)
- Course in research integrity
- Course on writing a research proposal (at least 1 credit)
- Teaching experience (at least 1 credit)

A minimum of 24 research credits must be completed.

Comprehensive Exam (See section 5.5):

- Pass the qualifying examination or appropriate coursework (FSC 440, 401, 455, 325, 429)
- Pass the doctoral comprehensive examination
- Record of Completion of Comprehensive Exams filed by Major Professor

Final Term/Graduation:

- Students should check Schedule of Courses to determine deadlines for graduation.
- Must fill out a Graduation Information Sheet at the Registrar's Office for final semester.
- Obtain departmental check out sheet for information on dissertation distribution requirements, etc.
- Submit draft of dissertation to committee prior to scheduling final exam.
- Prepared manuscript(s) based on dissertation.
- Schedule dissertation seminar.
- Schedule final oral examination plus departmental seminar.
- Dissertation format follows university regulations.
- Abstract of dissertation prepared following university guidelines.
- Final certification form completed by Major Professor.
- Distribute copies of thesis for Graduate School, college, department and Major Professor; plus an additional copy of the abstract for the Graduate School and the College.
- Time limit specified in Graduate Studies Catalog has been met.

ADDENDUM

Updates from the Graduate School provided in July 2008

1. There is a new (2008 – 2011) MSU-GEU contract for TAs (<http://grad.msu.edu/geu/agree.pdf>).
2. Related to #1: An arbitration decision requires that appointments for TAs at level 3 must be made after 6 semesters of experience (including summers) and with a Master's degree or equivalent. If units previously appointed to level 3 after fewer semesters, they are required to continue with that practice (the official list is available on the Graduate School Web site). The minimum number of 30 credits to earn a master's degree at MSU will be used as the definition for "Master's or equivalent" for purposes of level 3 appointments FOR TAs ONLY.
3. There are other changes in the TA contract related to required orientation program at the COURSE or DEPT level....see the contract for details. Units should specify that such an orientation takes place FALL, SPRING, SUMMER (if appropriate) and the approximate timing and time required. (Article 15 I. pg. 23)
4. The new tuition waiver is in the amount of nine credits for Fall and Spring semesters, and five for Summer semester.
5. Students traveling abroad should visit the "Travel Smart" website (<http://grad.msu.edu/travel/>) before their trip. **When students appointed as TAs or RAs travel outside the U.S. to conduct required thesis or dissertation research or to collaborate with investigators conducting research abroad, the department or research grant supporting the work will be required to pay for all needed vaccinations and or medications (e.g., anti-malarials) as determined by the MSU Travel Clinic.** Students may include those costs in applications for funds from the Research Enhancement or Travel Grant programs administered by the Graduate School.

Recommended Changes/Additions:

1. Please note that ETS has been rapidly phasing out the Test of Spoken English (TSE). Although MSU still accepts TSE scores as an alternative to the SPEAK test, the score report cannot have been issued more than two years prior to the student's appointment as a TA. Also note that the spoken section of TOEFL does not substitute for the SPEAK test.