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This handbook is prepared in an effort to provide a summary of the policies of the Graduate Faculty in Food Science regarding graduate study. Each graduate student is expected to be familiar with this handbook as well as the information contained on the University of Minnesota Graduate Student Services and Progress (GSSP) office website, One Stop and the Graduate Assistant Employment website. The material contained in these references is generally not reproduced in this handbook.

The Food Science Program Handbook is revised periodically to keep it up-to-date. However, students are urged to contact their advisor, the Director of Graduate Studies (DGS) or the Graduate Student Services Coordinator for the most current information. Suggestions for improvement of this handbook are welcomed at any time and should be submitted to the Director of Graduate Studies.

**Food Science Graduate Program Overview**

The Department of Food Science and Nutrition administers the Food Science Graduate Program. This program involves the application of the principles of chemistry, microbiology, processing technology, and consumer issues to the production of high quality, safe, and wholesome foods.

The specific objectives of the Food Science Graduate Program are: 1) to provide graduate level education for post-baccalaureate students interested in applying science and engineering principles to the theoretical and practical aspects of the entire food chain - from raw material production to product utilization by the consumer, 2) to provide a focus for graduate study and research in Food Science at the University of Minnesota, and 3) to aid in promoting interactions with other disciplines which relate to the study of food science.

While students in our Food Science Graduate Program may specialize in any one of the specific areas given above, they are also required to have a comprehensive knowledge of other areas.

- Food chemistry is concerned with the analytical, biochemical, chemical, physical, nutritional, and toxicological aspects of food and food ingredients.
- Food microbiology focuses on food safety (the prevention of foodborne disease and biosecurity), microbiological aspects of food production, food spoilage, food fermentations/biotechnology, genomics, processing, preservation, and storage.
- Food processing deals with the application of scientific, engineering, and economic principles to food processes and food processing equipment.
- Food technology involves the application of modern scientific and engineering principles to the preservation and distribution of food.
- The consumer issues area is concerned with the attributes of a food that influence its success or failure in the marketplace.

**Degrees Offered**

The program offers both the Master of Science and Doctor of Philosophy degrees. Qualified students with strong foundations in the sciences are eligible for admission. The Master's program offers two plan options. Plan A entails producing a thesis. Plan B substitutes a special project and additional coursework for a thesis. A M.S. normally requires a minimum of two years of full time effort to complete. This depends on the student's preparation, course of study, motivation, and research program. A Ph.D. would normally be completed in about four years based on similar criteria.

**Plan A Master’s with Thesis**

All Plan A Master's students must meet the minimum Graduate School requirements of 20 credits in the major and 10 thesis credits. Specific course requirements are listed under Degree Requirements. The student must pass a final oral examination that includes the defense of an acceptable thesis and general questions in food science.

**Plan B Master’s Degree without Thesis**

The general requirements for the Plan B Master's degree are the same as noted above, but 10 additional course credits are required in place of 10 thesis credits. The Plan B project is done in lieu of a Master’s thesis. It is equivalent to 120 hours of work of research and writing. The student must pass a final oral examination.

**Ph.D. Degree**

The Doctor of Philosophy degree is granted, not on the basis of successful completion of a definite amount of prescribed work, but rather in recognition of the candidate's notable accomplishments and abilities in a specialized field in food science. This is shown, first, by passing the required examinations covering both the general and the
specialized fields of the candidate and second, by preparing a thesis. The degree requires a minimum of 48 credits (24 course and 24 thesis) and a maximum of 72 credits. Specific course requirements are listed under Degree Requirements.

**Graduate Minor in Food Science**
A student majoring in another field who wishes to complete a minor in Food Science must consult with the DGS in Food Science to establish specific requirements and goals for an acceptable minor program of study. FScN 4112 Food Chemistry and Functional Foods (3 cr), 4121 Food Microbiology (3 cr), and BBE 4744 Engineering Principles for Biological Scientists (4 cr) must be taken for a M.S. minor totaling 10 credits.

**Entrance Requirements for the Food Science Graduate Program**
The Food Science Graduate Program endorses the Graduate School’s commitment to diversity which states: “The Graduate School embraces the University of Minnesota’s position that promoting and supporting diversity among the student body enriches graduate education by providing a multiplicity of views and perspectives that enhance research, teaching, and the development of new knowledge. A diverse mix of students promotes respect for, and opportunities to learn from, others with the broad range of backgrounds and experiences that constitute modern society. Higher education trains the next generation of leaders of academia and society in general, and such opportunities for leadership should be accessible to all members of society. The Graduate School and its constituent graduate programs are therefore committed to providing equal access to educational opportunities through recruitment, admission, and support programs that promote diversity, foster successful academic experiences, and cultivate the leaders of the next generation.”

Requirements for admission and application instructions can be found at [https://fscn.cfans.umn.edu/graduate-programs/food-science/prospective-students](https://fscn.cfans.umn.edu/graduate-programs/food-science/prospective-students)

**Action Taken on Applications for Admission**
The Graduate Studies Committee of the Food Science Graduate Program implements the rules and regulations of the graduate faculty in Food Science on all aspects of evaluation of applicants for admission to the program. The evaluation of applicants includes:

1. **Evaluation of scholastic record as an undergraduate (and graduate if appropriate).**
   - Overall grade point average (GPA). The Food Science Graduate Program has a preferred performance level of 3.0.
   - Grades in basic sciences; general chemistry, organic chemistry, biochemistry, physics, mathematics, biology, microbiology, statistics, and others as appropriate. Any student with a bachelor’s degree or its international equivalent from a recognized college may apply for admission if they have completed the following coursework requirements:
     1) General Chemistry with lab
     2) Organic Chemistry with lab
     3) Physics with lab
     4) Biology with lab
     5) Calculus (college level or documented equivalent)

2. **GRE / TOEFL Test Scores**
The applicant in Food Science is required to take the Graduate Record Examination (GRE). The results are advisory to the Food Science Graduate Studies Committee and no specific minimum scores are required. International applications must complete the TOEFL, MELAB, or IELTS if their native language is not English, except those who will have completed 24 quarter credits/16 semester credits (within the past 24 months) in residence as a full-time student at a recognized institution of higher learning in the United States before entering the University of Minnesota.

3. **Evaluation of three recommendations.**

4. **Personal objectives and goals statement.**
The application process has two steps. After an application is reviewed, the DGS reviews the remarks of the Graduate Studies Committee from each admission evaluation sheet and applicants that meet the basic admission criteria are notified they are “admissible” to the program. In order to be formally admitted, admissible applicants must acquire a faculty advisor. Those found admissible are not automatically assigned an advisor. Rather, a list of admissible students is sent to graduate faculty members every few weeks. Faculty interested in advising an applicant will contact them directly to discuss their interest and any availability of financial support. Applicants are also encouraged to contact a small number of specific faculty members with whom they would like to work, to discuss their background and why they are interested in working with them, but these contacts should be limited to the few faculty members whose work truly interests them. If an applicant is not able to find an advisor they can continue to be on the list of applicants looking for an advisor for an additional semester. If an applicant is unable to find an advisor the applicant is rejected for lack of an advisor.

Admission to the PhD Program
Admission to the Ph.D. program is possible under the following circumstances, subject to approval by the graduate studies committee and acquiring a faculty advisor.

- Direct Admission to the Ph.D. Program
In addition to an exceptional coursework record and exceptional GRE scores, the student must have demonstrated research capabilities. Demonstration of research capabilities can take many forms, e.g., a published paper, senior thesis, undergraduate research project report, etc. In any case, something tangible must be present for evaluation.

- Change of Status to Ph.D. before completion of the MS
The student and advisor must adequately document research capability.

- Change of Status to Ph.D. Program on completion of the MS
A student may apply for admission to the Ph.D. program after obtaining the M.S. degree.

To apply for Change of Status see http://www.grad.umn.edu/admissions/cos/index.html. There is a $75 application fee. The applicant creates a new username and fills out a new application entering information in the required (starred) fields, a personal statement explaining the reasons the applicant seeks to change status to the PhD and at least one example of documented research. The department also requires a letter from the advisor indicating that he/she will advise the student in the PhD. Other letters of recommendation can be submitted but they are not required for the application to be reviewed. After the Food Science Graduate Studies committee reviews the application the applicant is notified of the result. This process may take up to one month.

Financial Support
Department funding is restricted and offered through a competitive process, based on applicant qualifications and program resources. If available, it is usually in the form of a research or teaching assistantship and obtained through a student's advisor. Assistantships include an hourly wage, a full or partial tuition waiver, and reduced cost health care benefits. See Graduate Assistant Employment for more information on assistantship compensation and benefits.

Advisors and funding are limited, and not guaranteed to all applicants deemed admissible. There is no separate application to be completed for assistantships, or list of current advisee openings or faculty with funding, as these vary according to term and faculty member.

If a faculty member offers to advise you without financial support and you agree to those terms, you must not expect that graduate program funding will become available to you at some later date. Instead, you should seek to secure independent funding for the full duration of your graduate studies.

Faculty Advisor
The faculty advisor will assist the student with program planning, course selection, and the selection of a research project. Students do not often change advisors during the pursuit of a particular degree, but occasionally it is necessary to do so. If either the faculty member or the student wishes to initiate a change, this may be done by contacting the DGS who will consult with all concerned and arrange the change.
## Food Science Graduate Program Requirements

Students are responsible for knowing all program requirements of their degree when they matriculate. If program requirements change, students may elect to continue under the requirements in effect when they matriculated, provided they have remained in good standing.

### Registration Requirement

Students are required to enroll every semester (fall and spring) from the time of matriculation until degree conferral.

Students will be required to seek readmission if they do not register every fall and spring term. The Readmission Application [http://www.grad.umn.edu/admissions/readmission/index.html](http://www.grad.umn.edu/admissions/readmission/index.html) must be filed by all students who have been admitted to and registered in the Graduate School and are seeking readmission or a change of major or degree objective.

Please see this link for registration options for students who have completed their coursework but have not yet passed their final exam (e.g. GRAD 999 and Advanced Status): [http://www.grad.umn.edu/students/registration/specialcategories/index.html](http://www.grad.umn.edu/students/registration/specialcategories/index.html)

Students who are not able to maintain active status are strongly encouraged to consult with their Director of Graduate Studies, advisor, and relevant offices to determine whether requesting a leave of absence is the most appropriate course of action. Students who do not have an approved leave of absence and are not continuously enrolled may experience negative consequences related to academic, visa, financial aid, and other student issues. For more information see [http://www.policy.umn.edu/Policies/Education/Education/GRADSTUDENTLEAVE.html](http://www.policy.umn.edu/Policies/Education/Education/GRADSTUDENTLEAVE.html)

### Graduate Degree Plan

Students must submit a Graduate Degree Plan form, in consultation with their advisor, to ensure that their course plan fulfills the minimum graduate education and program requirements. A copy of the form is found here: [http://policy.umn.edu/forms/otr/otr198.pdf](http://policy.umn.edu/forms/otr/otr198.pdf). In addition, Food Science students must also return the Food Science Graduate Degree Plan Evaluation found here under Department Graduate Forms: [https://fscn.cfans.umn.edu/graduate-programs/student-forms](https://fscn.cfans.umn.edu/graduate-programs/student-forms)

Proposed use of transfer credit from other institutions is also included on this form. For information regarding transfer credits policy see [http://www.policy.umn.edu/Policies/Education/Education/GRADCREDITDEGREE.html](http://www.policy.umn.edu/Policies/Education/Education/GRADCREDITDEGREE.html)

The completed form with advisor(s) signatures and transcripts for any proposed transfer credits is submitted to the Food Science and Nutrition Graduate Student Services office in FScN 225J. The Graduate Studies Committee will assess the proposed program and if approved, will forward it to the College and then the Graduate Student Services and Progress office (GSSP) for final approval. It is recommended that the Degree Plan is submitted after completing 10 credits of graduate coursework.

MS students must submit the Degree Plan and the Food Science Graduate Degree Plan Evaluation no later than one semester before graduation. Doctoral students must submit them least one semester prior to the Preliminary Oral Exam.

### Grades and GPA

Grades of A, B, and C are permitted on the Degree Plan. No credit is allowed for work with a grade lower than a C minus, and the student is expected to maintain an average GPA in all coursework of better than 2.8 for the M.S. degree and 3.0 for the Ph.D. degree (A=4, B=3, C=2, D=1). Students may take any course on an S/N basis as per the University of Minnesota Graduate School regulations which specify that at least two-thirds of the credit hours on any official degree program must be in courses taken on an A/F basis. The Food Science Graduate Program permits a maximum of 4 credits of incomplete coursework on a student’s transcript. More than 4 credits of incomplete coursework will result in a hold on the student’s record. All grades received become a part of the student’s permanent record, whether or not they are satisfactory. While there may be unusual exceptions, no course may be retaken for the purpose of raising a low grade previously earned. In cases where the student has taken coursework beyond the minimum program requirements, the advisor and the Graduate Studies Committee in evaluating and approving the minimum program submitted, will also expect comparable standards of performance for all classes on the transcript. They may reject the minimum degree program if the total record falls below the academic standard for the degree and may also terminate candidacy. The DGS will monitor degree program progress to determine if any
student falls below the required GPA for the degree program. A student’s registration may be put on hold if the calculated GPA falls below the degree standard. The DGS will forward such transcripts of students below acceptable academic performance to the Quality Control Committee who will then review the transcript with the advisor and make recommendations to the DGS whether or not to put a hold on the record or terminate.

Annual Review of Student Progress
Students are required to complete the Annual Food Science Graduate Student Progress Report each year in order to ensure the timely completion of degree requirements and that M.S. / Ph.D. quality research is being conducted which will meet thesis requirements This form serves to summarize degree plan progress and to identify any concerns. When a student’s performance and/or progress does not meet program requirements, he/she shall be notified by the DGS or his/her advisor. If the deficiencies endanger the student’s status in the graduate program, he/she shall be promptly informed. A graduate student will be dismissed if his/her cumulative GPA is below 2.8 for three consecutive semesters.

Research expectations will be made clear to the graduate student by his/her faculty research advisor. The evaluation of research progress serves to keep the student and advisor focused on the timely completion of the degree. The faculty research advisor will determine satisfactory research progress; however, it is recommended that the student actively involve his/her Exam Committee. If satisfactory research progress is not being made, the advisor must inform the student in writing on the “Annual Food Science Graduate Student Progress Report” form and must indicate the conditions necessary for satisfactory progress.

The “Annual Food Science Graduate Student Progress Report” form will become a permanent record of accomplishment and will be maintained in the graduate student’s departmental file. A student’s continued participation in the Food Science Graduate Program is contingent upon submission of the Annual Food Science Graduate Student Progress Report each year. A student’s registration may be put on hold if this form is not submitted by the deadline.

Teaching Assistant Requirement
Students are required to serve as a Teaching Assistants for one class each year up to a minimum of 2 years for a M.S. student and a minimum of 3 years for a Ph.D. student. For more information see the Teaching Assistant Policy in the Appendix.

Proficiency in English
All international students must take the Teaching Assistant SPEAK test upon arrival and must pass before they TA any courses. The amount of remedial English study will be determined through testing by the University. English courses will have priority over other coursework until adequate proficiency is demonstrated. International students can also find more information at the International Student and Scholar Services Office, http://www.isss.umn.edu/

Safety Training
All graduate students must meet the University safety requirements for training as outlined by the Departmental Safety Committee for their work area. The laboratory safety coordinator for the student’s work area will have the necessary information on training required and forms for documentation of completing training. A copy of the Departmental Chemical Hygiene program is on file in FScN 225. This document provides the protocols for the safe handling and use of hazardous chemicals.

Requirements for the Master’s Degree in Food Science

Coursework
1) All Degree Plans must contain:

   a. FSCN 4112 Food Chemistry and Functional Foods (3 cr)*
   b. FSCN 4121 Food Microbiology (3 cr)*
   c. FSCN 4332 Food Processing Operations (3 cr)*
   d. One of the following three courses: FSCN 5122 Food Fermentations and Biotechnology, FSCN 5131 Food Quality or FSCN 5312 Food Analysis *
   e. FSCN 8310 General Seminar (typically taken during the third semester)
   f. FSCN 8318 Current Issues in Food Science
   g. At least 3 FSCN course credits at the 5XXX or 8XXX level (from Graduate Program list of appropriate courses). (These credits are in addition to any credits release as a result of having taken course(s) form courses listed in a to d above.)
h. Additional 5XXX and 8XXX credits to reach minimum of 20 course credits
i. Ten credits of FSCN 8777 Thesis Credits: Master’s

*If a student has taken these course(s) or their equivalents (the equivalence will be evaluated by the Graduate Studies Committee with DGS having final approval when the student files the Degree Program including transcripts and a course syllabus) to a, b, c, and /or d above, they can take other courses but must take an additional 5 FScN credits at the 5XXX and 8XXX level (from a Food Science Graduate Program list of appropriate courses) and rest are free to be used elsewhere.

2) Non-specified program courses are decided upon by the student and adviser.

3) For a Master’s Plan B degree 10 additional course credits are substituted for the 10 thesis credits. The courses to substitute are decided upon by the student and adviser. Remember that only 9 credits of 4XXX level courses are allowed on the program.

The Degree Plan cannot exceed 36 total credits nor contain more than 9 credits of 4XXX level courses.

Students must have a 2.80 minimum GPA for courses included on the degree plan at the time of degree clearance.

Students can choose to pursue a minor in another field. The courses must be approved by the Director of Graduate Studies in the chosen department.

**Master's Thesis or Plan B Project**

All students who complete a Plan A Master’s Thesis must file a digital copy of the thesis with the University in accordance with University standards. Students may request that the University embargo publication of the thesis for a limited period of time. For thesis formatting and submission guidelines see: [http://www.grad.umn.edu/current-students-graduate-student-services-progress/thesis-submission](http://www.grad.umn.edu/current-students-graduate-student-services-progress/thesis-submission)

The Plan B project, as required by the graduate faculty in the field of Food Science, is done by the candidate in lieu of a Master’s thesis. The intent of the Plan B project is to give the candidate some chance to do work (independent of courses) which should be of the quality of graduate study. It is equivalent to 120 hours of work or three full weeks of research and writing. It should consist of one of the following options which are intended to familiarize the candidate with the tools of research or scholarship in the field and serve to demonstrate the ability to work independently:

1. The student may do an equivalent amount of library or laboratory research and write a research report to satisfy the requirement as approved by the advisor. This may take the form of a research proposal.

2. The candidate may prepare one paper equivalent to 120 hours of work in one advanced course, over and above the normal course requirement as approved by the instructor in consultation with the advisor. This course must be from the major field of interest.

**Master's Final Examination**

**Final Examination Committee:**
The final examination committee must consist of at least three members, including the advisor/s. The student, after consultation with their advisor, submits a suggested list of faculty to serve on the Master’s Final Exam Committee. At least two members of this Committee must be members of the Food Science graduate faculty and one additional outside member representing another graduate faculty department. If a student has chosen a minor field, the faculty member from that field will serve as the outside examiner for the final exam. The faculty suggested must have been contacted in advance by the graduate student to insure their willingness to participate (if selected) in the student’s examination. Committee assignments and updates are initiated by the student via an online request form at least one month prior to the examination. The Director of Graduate Studies and the College will make the final approval of Examination Committee members. To request or update your examination committee and for further information about committee rules and membership see [http://www.grad.umn.edu/students/examiningcommitteesnew/index.html](http://www.grad.umn.edu/students/examiningcommitteesnew/index.html)

**Final Examination Procedure:**
The student’s advisor and other members of the Final Examination Committee must be notified at least two weeks in
advance that the thesis or Plan B project will be delivered on a particular date. All Examining Committee members
must have at least two weeks to read the thesis or Plan B project after it has been delivered. The Committee will
determine if it is ready for defense.

The student schedules the exam date, time, and room in consultation with their advisor and committee members. The
forms needed for the exam are included in the Graduation Packet which is requested online from the GSSP office up
to one month before the final exam. Every member of the final examination committee must certify on the master’s
thesis reviewer’s report that the thesis or project submitted in lieu of a thesis is ready for defense before the final
examination may take place.

All members of the committee and the student must participate in the final examination. Committee members and/or
the student may participate remotely as long as all conditions for remote participation in examination are met.
http://www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html

For students submitting a Plan A thesis, the final examination must contain an oral component. The final oral
examination is a closed examination open only to the final oral examination committee and the student. The
candidate for a Master’s degree, Plan A must pass the final oral examination of not more than 2 hours length. The
oral presentation of the thesis research for the examination should not exceed 20 minutes, if given uninterrupted, and
should cover research objectives, important results and the significance of the findings.

For students submitting a Plan B project, there is a final oral examination. The final oral examination is a closed
examination open only to the final oral examination committee and the student.

A majority vote of an examining committee is required to pass the master’s final examination. If revisions are required
as a condition of passing, the advisor/s must certify that the revisions have been completed before the degree is
awarded. If the student fails the final examination, he or she may retake the examination only if all committee
members, or all committee members save one, approve this option. The second attempt to pass the master’s final
examination must use the same committee members as the first examination unless an emergency situation
necessitates a substitution. If the committee does not approve a retake, or if the student fails the second attempt, the
student will be terminated from the program.

Benchmarks for Food Science M.S. Degree Program

This is a list of benchmarks for a timely graduation. Students should meet with their advisor to convert the
benchmarks into specific goals for their degree program. For the M.S. program, each student is required to be a
Teaching Assistant in two classes.

**First Semester**
1. Complete required safety training. For further information, contact the FScN Department Safety Coordinator.
2. With assistance from advisor, determine course selection and selection of a research project.
5. Begin thesis research.

**Second Semester**
1. Continue coursework.
2. Continue thesis research.
3. Fulfill 1st Teaching Assistant (T.A.) responsibility.
4. After completing 10 credits of graduate course work, submit Degree Plan and Food Science Graduate Degree
   Plan Evaluation
5. Prepare final draft of literature review.

**Summer following First Year:** Continue thesis research

**Third Semester**
1. Continue coursework.
2. Continue thesis research.
3. Fulfill 2nd T.A. responsibility.
4. Submit abstract for presentation at national/international meeting.
5. Present research at Graduate Seminar (Register for FScN 8310)
Fourth Semester
1. Complete coursework.
2. Complete thesis research.
3. Assign committee members to Final Exam Committee (at least a month before exam)
4. Begin writing publication(s)/thesis.

Important Deadlines for MS Degree Completion
1. Register every fall and spring semester until your degree is awarded.
2. Turn in Annual Student Progress Report in March every year.
3. Complete Graduate Degree Plan and Food Science Graduate Degree Plan Evaluation at least one semester prior to anticipated graduation.
4. Assign members to master’s final exam committee at least one month prior to exam.
5. Request Graduation Packet up to one semester before final exam.
6. Schedule final exam. Notify the advisor and other members of the final Oral Examination Committee at least two weeks in advance that the thesis or Plan B project will be delivered on a particular date. All Examining Committee members must have at least two weeks to read the thesis or Plan B project after it has been delivered.
7. Submit Graduate Application for Degree the first business day of anticipated month of graduation.
8. Obtain committee signatures on the Reviewer’s Report prior to the final exam.
9. Submit Final Examination Report and Reviewer’s Report to GSSP no later than the last business day of anticipated month of graduation.
10. After final exam, make corrections or revisions to the thesis or Plan B project. Submit thesis to GSSP Office and submit one bound copy of the thesis to FScN Student Services in 225J FScN. The Plan B paper does not require a hard cover, but must be in a securely bound material.
11. Perform required Departmental laboratory checkout. Turn in keys.
12. Students are encouraged to schedule an exit interview with the Department Head.

For links to the forms needed for these degree completion steps see:
https://www.grad.umn.edu/sites/grad.umn.edu/files/MastersA.pdf
Master’s Degree Plan B
https://www.grad.umn.edu/sites/grad.umn.edu/files/MastersB.pdf
Food Science Graduate Degree Plan Evaluation
https://fscn.cfans.umn.edu/graduate-programs/student-forms

For answers to frequently asked questions see:
http://www.policy.umn.edu/Policies/Education/Education/MASTERSCOMPLETION_FAQ.html

Time Limit for Earning the Master's Degree
All requirements for the master’s degree must be completed and the degree awarded within the shorter of five calendar years after initial enrollment in the graduate program or the more restrictive time frame specified by the program. Students who are unable to complete the degree within the time limits described above due to extraordinary circumstances may petition the program and collegiate unit for an extension of up to 12 months. Students must obtain the approval of their advisor/s and program DGS and submit the petition by the deadline. If a petition is approved, the student is notified in writing of the expectations for progress for and for the month/year of degree conferral. If the petition is denied, the student is notified in writing that he or she will be terminated from the graduate program upon expiration of the limit. Students who have been terminated under such circumstances may apply for readmission to the program; however, readmission is not guaranteed. For a petition form see
http://www.grad.umn.edu/students/forms/masters/index.html
Requirements for the Doctor of Philosophy Degree in Food Science

Coursework

1) All Degree Plans must contain:
   a. FSCN 4112 Food Chemistry and Functional Foods (3 cr)*
   b. FSCN 4121 Food Microbiology (3 cr)*
   c. FSCN 4332 Food Processing Operations (3 cr)*
   d. One of the following three courses: FSCN 5122 Food Fermentations and Biotechnology, FSCN 5131 Food Quality or FSCN 5312 Food Analysis *
   e. FSCN 8310 General Seminar (typically taken during the fourth semester)
   f. FSCN 8318 Current Issues in Food Science
   g. At least 3 FSCN course credits at the 5XXX or 8XXX level (from Graduate Program list of appropriate courses). (These credits are in addition to any credits release as a result of having taken course(s) form courses listed in a to d above.)
   h. Additional 5XXX and 8XXX credits to reach minimum of 24 course credits
   i. 24 credits of FSCN 8888 Thesis Credits: Doctoral

*If a student has taken these course(s) or their equivalents (the equivalence will be evaluated by the Graduate Studies Committee with DGS having final approval when the student files the Degree Program including transcripts and a course syllabus) to a, b, c, and/or d above, they can take other courses but must take an additional 5 FScN credits at the 5XXX and 8XXX level (from a Food Science Graduate Program list of appropriate courses) and rest are free to be used elsewhere.

2) Non-specified program courses are decided upon by the student and adviser.

Students who receive the MS Degree in Food Science at UMN and apply for and are granted the change of status to the PhD can use the majority of their MS coursework on their Degree Plan. However, they must take General Seminar and Current issues again.

The Degree Plan cannot exceed 72 total credits nor contain more than 9 credits of 4XXX level courses.

Students must have a 3.00 minimum GPA for courses included on the degree plan at the time of degree clearance.

Students can choose to pursue a minor in another field. The courses must be approved by the Director of Graduate Studies in the chosen department.

Doctoral Preliminary Written and Oral Examinations

Committee Selection

Each doctoral candidate must pass a written examination and a preliminary oral examination in the major field. The student, after consulting with their advisor, will choose his/her Committee in the first year of study. The Committee will consist of individuals on the graduate faculty of the University of Minnesota who have familiarity with the thesis subject area. The faculty suggested must have been contacted in advance by the graduate student to insure their willingness to participate (if selected) in the student’s examination. Committee assignments and updates are initiated by the student via an online request form at least one month prior to the examination. To request or update your examination committee and for further information about committee rules and membership see this link:
http://www.grad.umn.edu/students/examiningcommitteesnew/index.html

The doctoral preliminary written and oral committee must consist of at least five members, including the advisor/s. All members of the committee and the candidate must participate in the preliminary oral examination. Committee members and/or the student may participate remotely as long as all conditions for remote participation in the examination are met. See:
http://www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html

   i. At least three members (including the advisor) must be from the student's major field.
   ii. At least two members must represent a field outside the major
   iii. If the student has declared a minor, at least one member must represent the minor field.
iv. Members cannot satisfy the requirement with respect to more than one field.

If the student is being coadvised and both advisors are serving on the Examining Committee, an additional committee member will be added to the Committee.

Doctoral Preliminary Written Examination in Food Science

The Preliminary Written Examination is a research proposal prepared by Food Science doctoral students. Purpose of the examination: 1) It is a requirement of the Graduate School 2) To examine the student’s ability to write a research proposal 3) To evaluate and enhance written communication skills.

Research proposal: The research proposal must be drafted by the student with only minor help from the advisor. Any detailed proposals on this research topic, written by the advisor (for example to acquire funding for the student's research), cannot be utilized. The research proposal is designed to emulate the USDA AFRI Grant Proposal Project Narrative format for Foundational grants (with modifications).

Specific requirements:
- The proposal needs to contain all elements listed in 1 – 6 below.
- The maximum page limit is 18 pages with standard 12-point font, line spacing not exceeding six lines of text per vertical inch, including all figures and tables. References are not included in the 18 page limit.

Required Elements:

1) Project Summary/Abstract: 250-word limit
   The summary should be self-contained, specific description of the activity to be undertake. It should focus on the project goal and the objectives, plan to accomplish the goals, and the relevance of the project.

2) Introduction
   Include a clear statement of the long-term goal(s) and supporting objectives of the proposed project. Summarize the body of knowledge or past activities that substantiate the need for the proposed project. Describe ongoing or recently completed activities significant to the proposed project including the work of key project personnel. Include preliminary data/information pertinent to the proposed project. All works cited should be referenced.

3) Rationale and Significance
   a) Concisely present the rationale behind the proposed project;
   b) Describe the specific relationship of the project’s objectives to improvement in some aspect of food science (safety, novel development/discovery, food and health, biotechnology, improving quality, fundamental chemical/physical/microbial characterization, method development, etc.)

4) Preliminary Data. Can be included if appropriate.

5) Approach
   The activities proposed or problems being addressed must be clearly stated and the approaches applied are to be clearly described. Specifically, this section must include:
   a) A description of the activities proposed and the sequence in which the activities are to be performed;
   b) Methods to be used in carrying out the proposed project, including the feasibility of the methods;
   c) Expected outcomes;
   d) Means by which results will be analyzed, assessed, or interpreted;
   e) How results or products will be used;
   f) Pitfalls that may be encountered;
   g) Limitations to proposed procedures;
   h) A timeline for attainment of objectives and for production of deliverables that includes annual milestones with specific, measurable outcomes.

6) Bibliography and References Cited (no page limit)
   All work cited in the text should be referenced in this section of the proposal. All reference must be complete, including titles and all co-authors: must conform to an acceptable journal format; and be listed in alphabetical order using the last name of the first author or listed in the order of citation.
Examination Procedure:

- The research proposal and this section of Food Science Graduate Student Handbook (Doctoral Preliminary Written Examination in Food Science) are to be given by the student to each of the members of the student’s Examining Committee.

- At this same time these same documents and a list of the members of the Examining Committee must be given to the DGS (see below for contact information). The DGS will contact committee members to answer any questions about the procedures and confirm that they will be able to evaluate it within the appropriate timeline. If not, the DGS will work with the student to find an alternate examiner.

-- The evaluation is to be completed within 30 calendar days of receiving the proposal. If this time line cannot be met by a committee member, she/he must inform the student and the DGS immediately. The DGS, in consultation with the student and the student’s adviser will select a replacement committee member who is able to complete the evaluation within 30 days.

- Each committee member will read the proposal, evaluate it and issue a score of either SATISFACTORY or NOT SATISFACTORY and email their score to the DGS and the Associate DGS. Three weeks after the exam was delivered to the committee members the DGS will contact any committee member who has not yet submitted their evaluation to determine whether or not they will be able to complete it within the required 30 days. If committee members cannot complete the evaluation within 30 days, the DGS, in consultation with the student and the student’s adviser will select replacement committee member(s). Those new committee member(s) will have 30 days in which to complete their evaluation. If a committee member’s evaluation has not been received by 30 day deadline, the DGS will assign a grade from that committee member as Satisfactory.

- If all members of the committee deem the proposal SATISFACTORY the student will have passed the Preliminary Written Examination and the result will be reported to the Graduate School, the committee, the advisor and the student ASAP.

- If any “NOT SATISFACTORY” evaluations are given, the Examining Committee will be convened by the student’s advisor to discuss the reason(s) for the “NOT SATISFACTORY” evaluation(s). At the end of the committee’s discussion the committee will cast a final written ballot.

- Following the final ballot at this meeting, the student will be considered to “PASS” the Preliminary Written Examination if no more than ONE Examining Committee member assigns a “NOT SATISFACTORY” grade. If a “Pass” is the result of the meeting, the advisor will communicate this to the DGS and the result will be sent to the Graduate School. Also, the advisor is responsible for immediately notifying the student of the “PASS.”

- If, however, TWO or more Examining Committee members assign a “NOT SATISFACTORY” grade, a letter stating the concerns of the committee must be drafted by the committee chair (the adviser) and circulated to the other members of the committee for their approval prior to sending it to the student. The DGS must be copied on this letter.

- Upon receipt of the letter the student must submit, to each member of the committee, a revised proposal within 30 calendar days of the date of the letter from the committee.

- Along with a revised proposal, the student must also submit a letter documenting how each of the points raised by the Committee members in their letter was addressed. (The student is encouraged to contact each of the Committee members during this period to get their feedback.)

-- If the student does not submit a revised proposal and response to the points raised by the committee within the 30 day time limit, the student will Fail the Preliminary Written Examination. A notice of this will immediately be sent by the DGS Assistant to the Graduate School.

- Based on the final proposal and letter received within the 30 day requirement, each Examining Committee member must submit a second and final grade (within 30 calendar days) to the DGS, Associate DGS and DGS Assistant (see above for email addresses).

- Based on these grades, the student will be considered to pass the Preliminary Written Examination if no more than ONE Examining Committee member assigns a “NOT SATISFACTORY” grade.
- If the student obtains TWO or more “NOT SATISFACTORY” grades on the final proposal, he/she will be considered to have “FAILED” the Preliminary Written Examination and will be dismissed from the Food Science Ph.D. program.

  - The final vote of the Examining Committee will be filed by the DGS Assistant with the Graduate School and each committee member including the adviser will be notified of the final vote. The adviser will be responsible for notifying the student.

**Doctoral Preliminary Oral Examination**

The preliminary oral examination is conducted as a closed examination, attended by only the student and the examining committee.

At least one full academic semester before the degree is conferred, a preliminary oral examination of the student shall be given by a committee suggested by the student in consultation with the advisor and approved by the Graduate Studies Committee and Graduate School. This examination may not be taken until the written examination has been satisfactorily completed and until the student has completed most of the course work on their Degree Plan (i.e. 3 credits or less remaining).

**Purpose of the examination:**

1) It is a requirement of the Graduate School
2) To evaluate the student’s knowledge in food science
3) Evaluate the readiness of the student to conduct independent research

The student will give an oral presentation of the thesis plan in the examination not to exceed 15 minutes if given uninterrupted. This will form the basis for the research component of the examination.

The Examining Committee will report the results of the preliminary oral examination to the GSSP Office. If the Committee decides that a student passed the examination with reservations, it must inform the student immediately. The Committee has one week, however, to send the student a letter that clearly stipulates the reservations and the steps required to remove them. A copy of this letter must be forwarded to the GSSP Office. A second letter informing the student that the reservations have been satisfied is also required; again, a copy must be forwarded to the GSSP Office. The Chair of the Preliminary Oral Examination Committee should write both letters on the Committee’s behalf. The final oral examination cannot be scheduled until the Graduate School receives a copy of the second letter.

**Publication Requirement**

Before the student schedules the final oral examination, they will submit a first authored, peer reviewed paper on their doctoral research, in a journal pertinent to their research discipline (published or accepted for publication) to the graduate studies committee. Upon confirmation from the DGS that the publication requirement has been met the student can proceed with the final thesis defense.

**Doctoral Final Oral Examination**

**Committee Selection**

The student, after consulting with their advisor, will choose his/her Final Oral Examination Committee. The Committee will consist of individuals on the graduate faculty of the University of Minnesota who have familiarity with the thesis subject area. The faculty suggested must have been contacted in advance by the graduate student to insure their willingness to participate (if selected) in the student’s examination. Committee assignments and updates are initiated by the student via an online request form at least one month prior to the examination. To request or update your examination committee and for further information about committee rules and membership see this link: [http://www.grad.umn.edu/students/examiningcommitteesnew/index.html](http://www.grad.umn.edu/students/examiningcommitteesnew/index.html)

The doctoral preliminary written and oral committee must consist of at least five members, including the advisor/s. All members of the committee and the candidate must participate in the preliminary oral examination. Committee members and/or the student may participate remotely as long as all conditions for remote participation in the examination are met. See [http://www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html](http://www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html)

i. At least three members (including the advisor) must be from the student’s major field.
ii. At least two members must represent a field outside the major
iii. If the student has declared a minor, at least one member must represent the minor field.
iv. Members cannot satisfy the requirement with respect to more than one field.

If the student is being coadvised and both advisors are serving on the Examining Committee, an additional committee member will be added to the Committee.

**Doctoral Final Examination Procedure**
The doctoral final oral examination must include:
- A public presentation of the candidate’s dissertation to the doctoral final oral examination committee and the invited scholarly community. (1 hour)
- A closed session (open only to the doctoral final oral examination committee and the candidate) immediately following the public presentation. (2 hours)
To be recommended for the award of the doctoral degree, all committee members, or all committee members save one, must certify that the student has passed the doctoral final oral examination. Students are not allowed to retake the final oral examination.

**Submission of the Doctoral Dissertation**
All students who complete a doctoral dissertation must file a digital copy of the dissertation with the University in accordance with University standards. Students may request that the University embargo publication of the dissertation for a limited period of time. For thesis formatting and submission guidelines see: [http://www.grad.umn.edu/current-students-graduate-student-services-progress/thesis-submission](http://www.grad.umn.edu/current-students-graduate-student-services-progress/thesis-submission)

**Benchmarks for Food Science Ph.D. Degree Program**

This is a list of benchmarks for a timely graduation. Students should meet with their advisor to convert the benchmarks into specific goals for their degree program. For the Ph.D. program, each student is required to be a Teaching Assistant in three classes.

**First Semester**
1. Complete required safety training. For further information, contact FScN Department Safety Coordinator.
2. With assistance from advisor, determine course selection and selection of a research project.
5. Begin thesis research.

**Second Semester**
1. Continue coursework.
2. Continue thesis research.
3. Fulfill first T.A. responsibility.
4. Work on literature review.

**Summer following First Year**
1. Continue thesis research.
2. Prepare final draft of literature review.

**Third Semester**
1. Continue coursework.
2. Continue thesis research.
3. Fulfill 2nd T.A. responsibility.
4. Submit Degree Plan and Assign members to Written and Oral Preliminary Exam Committee
5. Submit abstract for presentation at national/international meeting.

**Fourth Semester**
1. Complete coursework.
2. Continue thesis research.
3. Take Written preliminary Exam
4. Take Oral Preliminary Exam after passing Written Preliminary Exam.
5. Begin writing publication(s).
6. Present research at Graduate Seminar (Register for FScN 8310).
Summer following Second Year
1. Continue thesis research.

Fifth Semester
1. Continue thesis research.
2. Fulfill 3rd T.A. responsibility.
3. Submit abstract for presentation at national/international meeting.

Sixth Semester
2. Assign members to Final Exam Committee (must be resubmitted even if committee has not changed).
3. Begin writing publication(s)/thesis.

**Important Deadlines for Ph.D. Degree Completion**

1. Register every fall and spring semester until your degree is awarded.
2. Turn in Annual Student Progress Report in March every year.
3. Complete Graduate Degree Plan and Food Science Graduate Degree Plan Evaluation and at least one semester prior to Preliminary Oral Exam.
4. Assign members to Preliminary Oral Exam Committee at least one month prior to exam.
5. Complete Preliminary Written Exam.
6. Schedule Preliminary Oral Exam at least one week in advance
8. Assign members to doctoral Final Exam committee at least one month prior to exam.
9. Request Graduation Packet up to one semester before Final Exam.
10. Notify DGS that you have completed the publication requirement for the Ph.D.
11. Schedule Final Exam. Notify the advisor and other members of the Final Examination committee at least two weeks in advance that the thesis or Plan B project will be delivered on a particular date. All Examining Committee members must have at least two weeks to read the thesis or Plan B project after it has been delivered.
12. Submit Graduate Application for Degree the first business day of anticipated month of graduation.
13. Obtain committee signatures on the Reviewer’s Report prior to the final exam.
14. Submit Final Examination Report and Reviewer’s Report to GSSP no later than the last business day of anticipated month of graduation.
15. After final exam, make corrections or revisions to the thesis. Submit thesis to GSSP Office and submit one bound copy of the thesis to FScN Student Services in 225J FScN.
17. Students are encouraged to schedule an exit interview with the Department Head.

For links to the forms needed for these degree completion steps see:

- Doctoral Degree Completion Steps
- Food Science Graduate Degree Plan Evaluation
  [https://fscn.cfans.umn.edu/graduate-programs/student-forms](https://fscn.cfans.umn.edu/graduate-programs/student-forms)

**Time Limit for Earning the Doctoral Degree**

All requirements for the doctoral degree must be completed and the degree awarded within eight calendar years after initial enrollment to the graduate program. Students who are unable to complete the degree within the time limits described above may petition the program and collegiate unit for one extension of up to 24 months. Students must obtain the approval of their advisor/s and program DGS and submit the petition for an extension at least six months prior to the end of the time limit. If a petition is approved, the student is notified in writing of the expectations for progress and of the month/year of degree conferral. If the petition is denied, the student is notified in writing that he or she will be terminated from doctoral candidacy and from the graduate program upon expiration of the time limit. Under extraordinary circumstances, students may file a second petition for an additional 24 month extension after the first 24 months have expired; however such petitions after the initial extension must be reviewed and approved by the advisor/s, program DGS, and Vice Provost and Dean of Graduate Education. Students who have been terminated under such circumstances may apply for readmission to the program; however, readmission is not guaranteed. For a petition form see

[http://policy.umn.edu/forms/otr/otr190.pdf](http://policy.umn.edu/forms/otr/otr190.pdf)
Miscellaneous

Orientation
There is a fall semester graduate student orientation usually held the second week of classes. There is also an open door policy on the part of the DGS.

Payment of Student Travel to Scientific Meetings
The major criteria for funding any student meeting travel are participation in the meeting by delivering and (co)authoring a paper or doing something else of equivalent weight. If this requirement is met and project funds are available, travel expenses may be funded on the basis of the lowest airfare, actual registration cost, room cost at lowest student rate, and a Department set meal allowance. Availability of funds is always a criterion whether explicitly stated or not and project leaders are free to set lower amounts. Where the above concepts of student travel limitation and of an activity requirement are maintained, variations that are within the spirit or intent in terms of amount expended may be introduced, in recognition of particular circumstances (e.g., some meetings within driving distance, others not; sharing auto transportation to reduce cost and allow others to attend who might not otherwise qualify, etc.). The rationale for such variations must be communicated to and approved by the Department Head prior to any travel commitment being made or any travel document prepared.

Travel Fellowships
Funds may be available through the Graduate Studies Committee to award some travel fellowships to graduate students in the Food Science Program. The grant will not cover all of the expenses and current policy is that the student should be presenting a paper. If the student desires support, he/she will submit the form located on here under Graduate Travel Award Application: [https://fscn.cfans.umn.edu/graduate-programs/student-forms](https://fscn.cfans.umn.edu/graduate-programs/student-forms)

Contact Information / Resources

Director of Graduate Studies in Food Science
Dr. Dave Smith, Professor
desmith@umn.edu 136H ABLMS, St. Paul campus Ph: 612.624.3260

Graduate Student Services
Nancy Toedt ntoedt@umn.edu or fscngrad@umn.edu 225J FScN, St. Paul campus Ph: 612.624.6753

Department of Food Science and Nutrition fscn.cfans.umn.edu
Sue Winkelman
Executive Administrative Specialist – general department information, keys, meeting room scheduling
swinkelman@umn.edu 225A FScN, St. Paul campus Ph: 612.624.1290

Dorit Hafner
Administrative Director hafne005@umn.edu FScN 225C Ph: 612-624-4789

Undergraduate Student Services
Sara Cannon scannon@umn.edu Ph: 612.624.4787
Permission numbers, Independent Study, Course/classroom scheduling

Accounting Office:
Jackie Lee, Principal Accountant - budgetary matters
leexx079@umn.edu 330 Haecker Hall Ph:612.624.3440

Sue Merrin, Accountant - payroll and health insurance
smerrin@umn.edu 225A FScN St. Paul campus Ph: 612.624.4289

Graduate Student Services and Progress Office gssp@umn.edu
www.grad.umn.edu

International Student and Scholar Services www.isss.umn.edu
190 Hubert H. Humphrey Center, Minneapolis campus Ph: 612.626.7100

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Office of Student Health Benefits  http://www.shb.umn.edu/
410 Church Street SE, N-321 BHS, Minneapolis campus

Graduate Assistant Employment Office  http://www1.umn.edu/ohr/gae/
gaoinfo@umn.edu, Donohowe Bldg, 319 15th Ave SE, Minneapolis Campus  Ph: 612.624.7070

Graduate Assistant Insurance Office  http://www.shb.umn.edu/twincities/graduate-assistants/index.htm

One Stop (search for everything U of MN)  onestop.umn.edu

Registration  http://onestop.umn.edu/registration/index.html

Financial Aid  http://onestop.umn.edu/finances/index.html

Parking and Transportation Services  http://www1.umn.edu/pts/

Opportunities for Student Involvement
-Student Representative for Food Science faculty meetings. See DGS if interested.
- COGS  http://www.cogs.umn.edu/

Mutual Rights and Responsibilities of Faculty and Graduate Students: Guidelines
http://www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPD.html


Office for Student Conduct and Academic Integrity  http://www.oscai.umn.edu/

Student Conflict Resolution Center  http://www.sos.umn.edu/

Managing Nepotism and Personal Relationships
http://www.policy.umn.edu/Policies/hr/ Rules/WORKPLACERELATIONSHIPS.html

FERPA regulations  https://asr.umn.edu/node/335
Appendix A

Food Science Teaching Assistant Requirements

Graduate education is more than just taking courses, passing milestones and doing research for a thesis. One significant component of graduate education is for students to participate in the education endeavor by acting as a Teaching Assistant (TA) in undergraduate courses. These experiences are invaluable in learning how to deal with people in meaningful ways and when confronted with difficult situations. Thus, graduate students should consider this experience as a means of improving their teaching and communication skills and as a part of their contribution to the educational experience. In return, the Department of Food Science and Nutrition intends that serving as a TA (with no extra compensation) will provide valuable educational benefits to the students.

The graduate faculties in the Department have agreed on a system that requires each graduate student to serve as a Teaching Assistant for about 60 hours a year for each year they are in a graduate program up to a minimum of 2 TA experiences for a M.S. student and a minimum of 3 TA experiences for a Ph.D. student. A student completing both M.S. and a Ph.D. degrees at the University of Minnesota would serve a minimum of 4 TA experiences for both degrees combined. A student who begins as a MS student and changes status to the PhD without completing the MS would serve a minimum of 3 TA experiences. A student holding a paying Teaching Assistant position will be automatically credited with 60 hours of service for each semester they serve as a paid TA.

It is generally expected that each TA would attend the lectures for the class they are assigned. Attendance at lectures is considered necessary to provide meaningful help in the class. This time does not count as part of the 60 hours of service. There are some classes or situations where lecture attendance may not be required; however, this decision rests with the course instructor.

All students are expected to meet this TA requirement irrespective of receiving a salary from the Department. In situations where the student is working full time outside the Department or where TA requirements present personal hardship, alternatives will be presented for meeting this requirement. Alternatives might include developing laboratories, giving guest lectures, or developing course materials for Internet delivery. Students must request a TA alternative if desired.

Every effort will be made to avoid scheduling a graduate student in an unpaid TA position during their first semester in Graduate School. All incoming students must take the General TA Workshop offered through the University at the start of their first semester. All international students will also be required to take the SPEAK test upon arrival. If students do not pass this test they will be placed in TA positions that do not require direct student contact.

Graduate students may request assisting in a specific course by contacting the TA Coordinator Dave Smith desmith@umn.edu.

This TA system assumes that each student will put forth about 4 hours per week for a given class or 60 hours effort per course. A graduate student may request that he/she contribute double this, 8 hrs per week per class, to get double credit thereby reducing the number of years that a student would have to serve as a TA. This request will be granted when it is consistent with course needs.

The time estimated for a given class may be in error and thus, students should keep an accurate accounting of their time and review this with the course instructor on a regular basis. If the time required from an individual graduate student is over what has been estimated, or the nature of the work is different from that promised, the student should first attempt to resolve the discrepancy as soon as possible with the course instructor. If that fails, the student should bring the issue to the TA Coordinator who will work together with the student, faculty member and department head to correct the situation.

Graduate students may request evaluations of their performance as a TA from the faculty supervisor and from students in the course as a part of the required student course evaluation.
Appendix B

Policy and Practices Relating to Research Assistants and Paid Teaching Assistants

Selection
Notification of selection as a graduate Research and Teaching Assistant is by letter from the Head of the Department. Any assistantship still in effect at the end of the semester in which the student completes all requirements for the degree sought terminates automatically unless specifically reappointed in accordance with the provisions relative to shifting to a Ph.D. program.

Reappointment
All criteria used for the initial appointment are utilized to evaluate reappointment on a regular basis. The Department may elect not to reappoint a RA/TA for the next term of appointment on the basis of its evaluation of performance of the duties of the position, the student’s progress toward the degree, or budgetary constraints. Each RA/TA will receive notification about mid-July renewing his or her appointment as an RA for the academic year or for the next fiscal year. The renewal normally is in the same format as the notification of original appointment.

Responsibilities of the Graduate Student
Each appointment or reappointment to a graduate research assistantship carries responsibilities and activities that will be defined by and regulated by the project principal investigator or faculty advisor. The advisor should identify the source of funds to the RA. Whenever continuation involves a shift from M.S. to Ph.D. it should be emphasized that such continuation is contingent upon adequate research performance, satisfactory academic performance in graduate studies, and formal approval of a change in degree objective. Without such performance and approval, appointment to the assistantship will be terminated.

Relationship to the Department
The relationship of the graduate student to departmental and college governance is defined in the constitutions of the colleges, and graduate student representation at faculty meetings is defined in the departmental guidelines.

Student Rights
A graduate Research Assistant who is discharged prior to appointment termination, or is disciplined in any way, is entitled to a written explanation of the cause and of her/his avenues of appeal. Graduate Assistants are held responsible only for actions relating to or affecting their academic duties, and in appeal cases, assistants will be continued on salary until final decision.

Grievances
If there is a potential grievance, the student should first attempt resolution working with the advisor, second with the Director of Graduate Studies and third, with the Department Head. If the problem remains unresolved, the student should contact the Graduate Assistant Office. Graduate students with employment grievances are covered by the Regent’s University Grievance Policy. For more information see [www.umn.edu/conflictresolution](http://www.umn.edu/conflictresolution)
Appendix C

Food Science Graduate Committees/Officers

Director of Graduate Studies
Generally DGS terms are two years in length, with an option for term renewal. Elections are held in the spring for the following academic year. The Director of Graduate Studies (DGS) shall supervise and coordinate the administration of graduate studies within the graduate program or programs for which he/she is responsible. He/she shall perform such duties in the administration of graduate studies as the faculty of the graduate program may assign, normally including such functions as arranging for the review of graduate admissions, orienting and counseling graduate students with respect to program and degree requirements until they choose graduate advisors, assisting graduate students in choosing advisors, enforcing the regulations of the Graduate School and of the degree programs, receiving and arranging for review of petitions submitted by graduate students, maintaining graduate student records, initiating and providing data for evaluations of graduate students, referring to the graduate faculty in the degree program or to a committee on graduate admissions or graduate studies any of the matters which may require its attention and providing it with information or data it may need and providing guidance and information needed by graduate advisors in the degree programs. The DGS also serves as the programs representative to the Biological Sciences Policy and Review Committee of the Graduate School.

Associate DGS
The DGS is elected to a two-year term by the graduate faculty in Food Science. Associate DGS will serve as DGS when DGS is absent from campus. Associate DGS maybe past DGS or DGS elect. The DGS elect is elected by the program faculty no later than six months prior to the completion of the second year term of DGS.

Graduate Advisors
Each graduate student must secure the assistance and counsel of a graduate advisor who is a member of the graduate faculty of the program in which he/she is pursuing studies. When appropriate, one advisor may counsel the student during the period of graduate coursework, and another may supervise the student’s thesis or dissertation research; the latter shall have special competency in the area of the student’s concentration. Students may obtain help from the Director of Graduate Studies in identifying appropriate advisors or changing advisors. The provision of an advisor for each student is the responsibility of the faculty of the program. However, the individual advisor-advisee relationship rests upon mutual agreement. The advisor (a) shall assist the student in formulating a program of study and research, and his recommendation must accompany the program submitted; (b) shall review and attach a recommendation to any petition the student may make with respect to graduate status or requesting a waiver of normal requirements affecting graduate studies, examinations, or research; (c) shall direct the student’s research for and writing of any graduate thesis or dissertation; (d) from time to time shall provide the student with evaluations of academic progress. The advisor should normally be a member of the student’s committees for approval of dissertation and final oral examinations, and shall be responsible for having the reports signed by the members of the Examination Committee and returned to the Graduate School. In the discharge of these functions the graduate advisor is responsible to the faculty of the program and to the Dean of the Graduate School.

Graduate Studies Committee
The Graduate Studies Committee shall implement the wishes of the graduate faculty in Food Science on all aspects of evaluation of applicants for admission to the program and on the approval of graduate student programs, thesis titles and abstracts, petitions, and associated matters. Activities not explicitly identified with other standing committees of the Food Science Graduate Program also would be a responsibility of this Committee. The Committee shall be made up of the Director of Graduate Study (Chair), the Associate Director of Graduate Study, the Affirmative Action Officer for the program, and the Chair of the Quality Control Committee. The Graduate Faculty of Food Science may add other individuals to the Graduate Studies Committee or modify the Committee by an appropriate motion at a regular graduate faculty meeting.

Graduate Handbook Committee
Preparation and revision of the Food Science Graduate Faculty-Graduate Student Handbook.
-Handbook is to include main points of policy of Graduate School and Department of Food Science and Nutrition.
-Handbook shall contain specifics of the Food Science Graduate Program with respect to requirements for M.S. and Ph.D. programs including examination guidelines and course requirements.
-Handbook shall contain specifics and standard procedures of the Food Science graduate faculty committees.
To prepare or revise handbook at least every two years unless otherwise voted by the graduate faculty. To insure adequate copies are available for new faculty and students and that such copies are distributed and used.
Quality Control Committee
Periodically review procedures and recommend to the faculty possible changes and new procedures for the following:
- M.S. and Ph.D. oral examination procedures
- GPA standards for graduate student
- Minimum course requirements for M.S. and Ph.D. students
- Monitor student progress on annual basis
Review current files on all M.S. and Ph.D. students, as supplied by DGS, to determine if the time sequences and GPA standards, as outlined in the handbook for degree completion, are being followed and recommend actions with respect to holds and warnings. Periodically review and sit in on student oral examinations to determine whether student quality is being maintained.

Orientation Committee
Coordinates orientation activities for incoming and continuing graduate students.

Seminar Committee
Coordinates scheduling of graduate seminar series.

GOVERNANCE: OFFICERS, COMMITTEES AND STUDENT REPRESENTATIVES

Food Science Graduate Program Committee Members as of September 1, 2013

A. Director of Graduate Studies: David E. Smith
B. Associate DGS: Devin G. Peterson
C. Graduate Studies Committee
   David E. Smith, Chair, Director of Graduate Studies
   Devin G. Peterson, Associate DGS
   Baraem Ismail
   Tonya Schoenfuss
D. Quality Control Committee
   Zata Vickers, Chair
   Daniel J. O’Sullivan
   Francisco Diez
F. Representative to the Graduate Faculty
   TBD
G. COGS Representative
   TBD
Appendix D

List of Food Science Graduate Faculty
https://fscn.cfans.umn.edu/faculty-staff/faculty/food-science-faculty

Graduate Faculty Membership Categories and Responsibilities
https://netfiles.umn.edu/cfans/Intranet/Grad/Process/CFANS_Grad_Faculty_Status.pdf?uniq=-yw85ww

Criteria for Maintaining Membership on the Food Science Graduate Faculty
The Food Science graduate member contributions will be reviewed by the Food Science Graduate Program Quality Control Committee every three years. This Committee will forward its recommendations to the DGS for a full graduate faculty vote on continuation or termination of membership for each member. Senior Members, Advising Members, or Members must satisfy at least one requirement in each of the four categories listed under section I in the three-year period under review. Affiliate Senior Members, Affiliate Advising Members, or Affiliate Members must satisfy at least one requirement in two of the three categories (Seminar, Teaching, and Research) listed under section I in the three-year period under review. It will be the responsibility of each graduate faculty member to communicate in writing his or her contributions, with documentation, to the DGS at the time of the review.

Section I. Participation in Food Science Graduate Program Activities
- Seminar
  Present a seminar at the Food Science graduate seminar series
  Regularly attend the Food Science graduate seminar series or special Food Science Graduate Program seminars
  Invite and host an outside speaker sponsored by the Food Science Graduate Program

- Governance
  Regularly attend Food Science graduate faculty meetings
  Serve on a Food Science Graduate Program committee

- Teaching
  Coordinate or co-coordinate Food Science graduate seminar series
  Write a question for the Ph.D. written prelim and grade the responses
  Teach or co-teach a food science course (FScN designation) for graduate credit

- Research
  Serve on examination committees for Food Science M.S. or Ph.D. students
  Advise Food Science M.S. or Ph.D. students
  Contribute to writing a successful grant to support a Food Science graduate student
  Publish at least 2 peer-reviewed research/review papers in field of Food Science

Section II.

I no longer wish to remain a member of the Food Science Graduate Program.

Signed: ___________________________ Date: ________________