



# **Graduate Handbook**

## **Department of Food Science and Technology**



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The purpose of this manual is to provide a summary of policies and procedures of the Food Science and Technology graduate program. All graduate students should refer to this manual as a reference throughout their program. This manual, however, is not a replacement for the current UNL Graduate Studies Catalog, which contains current information on graduate program requirements, thesis guidelines, and deadlines.

The information in this handbook and other University catalogs, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.

“It is the responsibility of the student to be familiar with the information in the Graduate Catalog and on the Graduate Studies website, and to know and observe all regulations and procedures relating to the program he or she is pursuing.”

# College of Agricultural Sciences and Natural Resources Strategic Framework

## [College of Agricultural Sciences and Natural Resources Strategic Framework for Graduate Education](#)

### *Vision Statement*

- Every graduate student is inspired and empowered to make a difference in a complex and diverse world

### *Goals*

1. Individualized student experience for personal goals and professional growth of our graduate students
2. Holistic approach that Integrates curriculum, research and discovery, experiential learning, and professional development that prepares students to pursue opportunities and solve challenges In Nebraska and beyond
3. Diverse experiences with and beyond the university community that develop global and inclusive mindset/perspective

## Overview

The Department of Food Science and Technology is dedicated to providing high-quality education and training to graduate students preparing for careers in food science and technology in the food industry, academia, or government.

We work closely with The Food Processing Center, Food Allergy Research and Resource Program, Nebraska Food for Health Center, and the UNL Dairy Store as well as industry and government leaders and start-up entrepreneurs.

Our main areas of research include

- Biocomputing
- Digestive Wellness
- Food Allergens
- Food Safety
- Preservation and Transformation

### ***Degree Options***

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We offer interdisciplinary programs leading to both masters and doctoral degrees. As a student of our graduate program, applicants will take courses and conduct research under faculty members located on the University of Nebraska-Lincoln's Nebraska Innovation Campus.

1. Master of Science Degree (M.S.) in Food Science and Technology
  - A. Thesis
  - B. Project
2. Doctoral Degree (Ph.D.) in Food Science and Technology

### ***Certificate Options***

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- ❖ Food Safety and Defense Graduate Certificate (online)  
(Part of the Great Plains Interactive Distance Education Alliance, in cooperation with Iowa State University, Kansas State University, and the University of Missouri)

## Graduate Education Oversight

### ***Departmental Graduate Committee***

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The mission of the Food Science and Technology Graduate Committee is to develop and maintain excellence in the departmental graduate program.

### *Membership and Selection*

- Consists of four Food and Technology graduate faculty members appointed by the Department Head.
- The chair of the Graduate Committee is appointed by the Dean of Graduate Studies upon the recommendation of the Department Head for a five-year term.
- Committee members shall be appointed for staggered three-year term.

### **Responsibilities**

- Suggest and modify graduate admissions and degree requirements for departmental graduate faculty approval
- Evaluate applications and recommend acceptance into the graduate program
- Monitor graduate student academic performance and progress
- Address academic issues and student concerns including the oversight of student appeals
- Identify and advance new curricula
- Update FDST Graduate Handbook and website on policy and procedure changes

### **Chair Responsibilities**

- Assure fair and consistent compliance with all Graduate College and UNL policies that govern graduate education
- Approve Supervisory Committees and Plans of Study
- Assists graduate coordinator with teaching assistant assignments

### **Faculty Mentor**

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Each graduate student must have at least one faculty mentor, sometimes there are co-mentors.

- Advises the student regarding course work and general academic requirements
- Guides the student through their research program
- Serves as the chair of the student's supervisory committee and assists the student in selecting committee members.

### **Resources:**

- [Graduate Mentoring Guidebook](#)
- [Guidelines for Good Practice](#)

### **Supervisory Committee**

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The primary function of the Supervisory Committee is to assist the student in developing a Plan of Study that is compatible with the goals of the student. The Supervisory Committee ensures the student has reached a satisfactory level of academic and research achievement.

- Monitors the progress of the student through annual reviews
- Provides counsel if problems arise during the program
- Conducts mid-program Comprehensive and Final Oral examinations

## **Application and Admission**

### **Holistic Application Review**

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Because each applicant's background and experience is unique, the Department of Food Science and Technology take a holistic approach evaluating the applicant as a whole individual. Applicants need to follow the directions when submitting their application.

### **Online Admission Application**

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The University of Nebraska-Lincoln uses an [online application](#). If applicants do not have a CollegeNET account, they will need to "Create a New Account."

### **Deadlines**

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The Food Science and Technology Graduate Program accepts new students three times a year.

<i>Admission Term</i>	<i>Fall (August)</i>	<i>Summer (May)</i>	<i>Spring (January)</i>
<i>Priority Deadline*</i>	<i>December 15</i>		
<i>Application Deadline</i>	February 15	February 15	September 15

\*Top applicants who apply by December 15 for the following fall admission term will be considered for fellowships. If residing in the United States, up to two applicants may be invited for a paid campus visit to the University of Nebraska-Lincoln to tour the Food Science and Technology Department and interview with faculty researchers.

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### **Application Fee**

All degree-seeking students must submit a nonrefundable application fee to the University before their application is processed. The UNL Food Science and Technology Department does not waive the application fee.

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### **Transcripts**

Successful applicants have a bachelor's degree or higher degree with a background in food science, microbiology, biochemistry, engineering, nutrition, biology, chemistry, animal science or other related field. Transcripts are evaluated for course work and outstanding grades in organic chemistry, calculus, and physics.

#### **Master of Science Degrees**

Applicants must hold a bachelor's degree or higher degree from an accredited institution.

#### **Doctoral Degree**

Applicants must hold a master's degree with thesis from an accredited institution. *Although applicants having a bachelor's degree or MS non-thesis degree may apply for the doctoral degree program, only applicants with prior exceptional research experience are considered.*

#### **Documentation**

Applicants must upload one unofficial transcript from each college or university attended to their application. For academic records in a language other than English, both the original-language documents and a word-for-word English translation must be uploaded along with certificates and diplomas.

[Official transcripts](#) are required only if admission is offered and accepted so newly admitted students can enroll.

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### **English Proficiency Verification**

Applicants whose native language is not English must submit TOEFL or IELTS test scores to demonstrate their ability to undertake advanced academic work in an English-speaking institution.

Official scores must be sent electronically to UNL Graduate Studies by Educational Testing Service (Institution Code 6877).

Minimum Requirements	
TOEFL, internet-based	79
TOEFL, paper-based	550
IELTS	6.5

- TOEFL or IELTS scores are valid for two years.
- [Exemptions for the English proficiency requirement](#) are granted for non-native speakers who have received a bachelor's or more advanced degree either from an accredited U.S. institution or from a university outside the U.S. at which English is the official language of instruction.

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### **Letters of Recommendation**

Letters of recommendation provide critical information about personal attributes and student drive. Applicants should choose three recommenders who are able to evaluate their academic and research experience, work ethic, initiative, and critical thinking skills as it relates to graduate school.

Applicants may submit their admission application before receiving all the letters of recommendation. It is highly encouraged that letters be received within two weeks of the deadline.

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### **Personal Statement**

The personal statement should consist of 1-2 pages, and include:

- A clear and well-defined interest within one of the food science and technology disciplines
- Care deeply about your discipline. How would you contribute to expand knowledge within that discipline?

- Describe your long-term professional goals. What do you hope to accomplish after finishing your graduate degree?
- Include previous research, teaching and work experiences. How would they contribute to your success in a graduate education?

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### ***Resume or Curriculum Vitae***

Successful applicants show their initiative outside the classroom. As part of their personal statement and resume/CV, applicants should include prior research, teaching, work, leadership, and volunteer experiences.

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### ***Experience, Awards and Publications (Additional Information)***

As part of the application, applicants can upload files or provide URL links related to awards and publications. Please do not duplicate information that is listed on resume/CV.

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### ***Identify a Faculty Mentor***

*Applicants must have faculty willing to accept them and serve as their faculty mentor.* Applicants must list on their application at least one faculty mentor, and up to five faculty mentors, who they are interested in working with.

- Master of Science Degree (thesis option): <https://www.unl.edu/gradstudies/academics/programs/FDST-MS>
- Doctoral Degree: <https://www.unl.edu/gradstudies/academics/programs/FDST-PHD>

After submitting their application, applicants should start communicating with faculty mentors with shared research interests to learn about faculty research, how the applicant would fit into the lab and if assistantship funding is available.

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### ***Financial Support***

#### ***Graduate Assistantships***

Applicants for the Master of Science Degree with Thesis and Doctoral Degree are eligible for graduate assistantships. No additional forms are required to be considered for financial support. The applicant's letter of recommendation, personal statement and resume/CV are used to determine if a faculty mentor is willing to accept applicants into their lab and offer a graduate assistantship.

Sponsorship for a graduate assistantship is dependent on funding and an open position in a faculty mentor's lab. Most funding comes from outside funding agency grants. When a grant is approved, the faculty mentor searches for a well-qualified applicant to work on a specific research project. They try to match research assistantships with individuals whose interests and expertise are suited to the research project.

Graduate assistantships are annually renewable based on satisfactory performance.

Graduate assistantships include a monthly stipend, tuition waiver, and 79% of the University health insurance premium. Students are responsible for ALL student fees plus the student portion (21%) of the University health insurance premium. Student fees which run approximately \$1,500/semester. The fee amount will vary depending on which courses are taken. Student fees include access to the UNL library, campus recreation and student health center.

Our Food Science and Technology graduate research and teaching assistantships are awarded on a very competitive basis. With these assistantship awards come the expectation that applicants will be fully committed to completing their graduate academic program and contributing to the faculty mentor's research project.

#### ***Fellowship and Scholarship Opportunities***

Applicants are encouraged to apply for educational, government, professional organization, and other fellowships. International students are often supported through government scholarships or Fulbright fellowships. Domestic students have opportunities to apply for NIH Research Training or Development Programs and NSF Graduate Research Fellowship or Research Traineeship.

#### ***Employer Tuition Reimbursement***

If applicants are currently employed in the food science and technology industry, they should check with their employer for professional development opportunities that provide tuition reimbursement.

### ***Special Consideration for Master of Science Degree with Project***

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Applicants for the Master of Science Degree with Project are not eligible for graduate assistantships. The Master of Science Degree with Project is considered a terminal degree, meaning applicants do not intend to participate in research or go onto a Doctoral Degree.

Once admitted, applicants may not change to a Master of Science Degree with Thesis option. Dr. Rossana Villa Rojas currently serves as our faculty mentor for the Master of Science with Project.

## **Special Consideration for Employees (Industry and UNL)**

### ***Graduate Students Employed in Industry***

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Graduate students currently employed in the food science and technology industry and receiving employer tuition reimbursement may pursue a Master of Science Degree with Project, Master of Science Degree with Thesis or Doctoral Degree.

The project shall be selected cooperatively by the student, the student's FDST faculty mentor and the student's employer. During active research in the laboratories of their employers, it is expected the student submit a monthly written report of research activities, if not weekly contact with faculty mentor.

Graduate students currently employed are expected to follow the graduate student expectations, including all degree requirements, meeting annually with their supervisory committee, attending seminar, and participating in teaching experience.

### ***Graduate Students Employed by UNL***

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UNL employees may be eligible for employer tuition reimbursement to pursue a Master of Science Degree with Project, Master of Science Degree with Thesis or Doctoral Degree.

The project shall be selected cooperatively by the student, the student's FDST faculty mentor and the student's UNL work supervisor. To reduce conflict of interest, UNL employees must identify a FDST faculty mentor other than their immediate UNL work supervisor. Their UNL work supervisor may serve on their supervisor committee as an additional committee member.

Graduate students currently employed are expected to follow the graduate student expectations, including all degree requirements, meeting annually with their supervisory committee, attending seminar, and participating in teaching experience.

## **Graduate School Expectations**

### ***Nondiscrimination***

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"The University of Nebraska [does not discriminate](#) based on race, color, ethnicity, national origin, sex, pregnancy, sexual orientation, gender identity, religion, disability, age, genetic information, veteran status, marital status, and/or political affiliation in its programs, activities, or employment."

All graduate students are expected to conduct themselves in mature, professional, courteous manners toward other students, staff, and faculty. Graduate students should work together with faculty and staff to create an environment that stimulates and encourages creative and independent learning while respecting academic freedom that allows expression of differing opinions.

### ***Huskers Email Account***

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Students receive a new e-mail account (huskers.unl.edu) when they enroll. In May 2019, the University of Nebraska-Lincoln made it mandatory that all correspondence go to the Huskers email account. Students are responsible to check their huskers.unl.edu account regularly.

### ***Professionalism***

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Graduate school is vastly different from undergraduate education. It is more than just taking more classes at a higher level. Graduate students join a community of scholars and are expected to contribute – even create new information to expand knowledge within the food science and technology discipline.

Graduate students are treated as professionals, and responsible to develop and demonstrate their abilities to be an independent scholar and researcher. Faculty mentors and graduate students need to work together to set expectations and essential commitments. Problems in mentoring relationships most often occur because of misunderstandings and lack of clear communication.

*Resources:*

- [Graduate Mentoring Guidebook](#)
- [Guidelines for Good Practice](#)

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***Workload***

Graduate students are expected to master subjects and to devote substantial time in independent library or laboratory investigation. Additional time is associated with academic research leading to the successful completion of the student's thesis, project or dissertation and includes scholarly work such as reading and synthesizing scientific literature; technical writing; laboratory work; data management; graphics and presentation preparation; and quantitative analyses. Graduate students are expected to network with fellow scholars by attending seminar presentations and regional and national professional meetings and conferences. There is no limit to time spent on studies and research relating to the advanced degree.

Graduate assistants are required to work 19.6 hours per week teaching or doing research for their faculty mentor, while being enrolled as a full-time student. This is in addition to course work and research for their thesis or dissertation. Their assistantship, thesis, and dissertation research activities, along with academic coursework, all constitute considerably more than a full-time job.

All graduate students are expected to maintain daily working hours as do faculty and staff. Graduate students are eligible for all University staff holidays (e.g. New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas). Undergraduate student holidays and semester breaks are not graduate student holidays. These periods provide an excellent opportunity for concentrated research.

Graduate students are responsible for keeping their faculty mentor informed of their status and how they may be reached. All vacations and leaves must be planned in advance and approval obtained from the student's faculty mentor.

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***Time Management***

All graduate students are expected to manage time effectively for maximum professional development as well as personal health and well-being and balance competing demands such as being a student, graduate assistant, parent, spouse, caregiver, etc.

Graduate school will go much faster than anticipated. Students are responsible for tracking their progress and deadlines. Graduate students should develop a work plan that includes both short-term and long-term objectives as well as a series of deadlines for completing each step. [The Individual Development Plan \(IDP\): Chart Your Course](#)

Keep in mind the anticipated graduate date. It generally takes one semester to write a high-quality thesis, project paper, or dissertation.

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***Safety and Research Responsibility Training***

Safety is the responsibility of every member of the University of Nebraska-Lincoln community. All students will receive the appropriate safety training *prior* to participating in research projects.

Students need to work with their faculty mentors to determine what safety and research training is required. Certificates of completion must be kept on file. Refresher training may be required throughout a degree program.

***Safety Training***

The University of Nebraska-Lincoln Environmental Health and Safety (EHS) provided [web-based training](#).

- Core 1 - Injury and Illness Prevention Plan (IIPP)
- Core 2 - Emergency Preparedness Training

- Chemical Safety Training
- Biosafety 100: Research Compliance
- Bloodborne Pathogens for Laboratory Workers (including HIV/HBV/HCV)
- Autoclave Operation Training

#### *Human Research Subjects*

The Institutional Review Board (IRB) oversees Human Research Protection Program (HRPP). Research staff, including graduate students, are required to complete [CITI training](#) if they have direct contact with human participants (e.g., for subject recruitment, data collection) or who have access to information that links participants' names with their data.

Research staff, including graduate students, who work with the non-identifiable data (e.g., data entry, data analysis) AND who have no contact with participants and no means of identifying participants or linking participants' names to their data are not required to complete training.

#### *Animal Research Subjects*

Research staff, including graduate students, working with animals are required to complete [Institutional Animal Care and Use Committee \(IACUC\) training](#).

#### *Departmental Autoclaves*

To use and have access the Food Innovation Center autoclaves, graduate students or faculty mentors need to contact Jayne Stratton, FDST Safety Committee Chair, to set up autoclave training.

### ***Ownership of Data and Intellectual Property***

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#### *Research Materials and Data*

All data and records pertaining to the research activities are the property of the Department of Food Science and Technology at the University of Nebraska-Lincoln.

Research materials such as lab notebooks and research files shall remain the property of the faculty member(s) responsible for directing the project.

The same applies to other items such as photographs, microscopic slides, specimens, models, and computer programs that might have been developed as a part of the graduate activities.

#### *Intellectual Property*

University of Nebraska Board of Regents (BOR) policy requires that, as employees of the University all faculty, staff, and some students, disclose and assign every invention or discovery resulting from the performance of duties within the scope of University employment, or from the use of University resources, to the University. The University has three policies that govern intellectual property.

- BOR Bylaw 3.10, establishes University ownership of inventions. When the Board of Regents established policy 3.10, the intent was to encourage the commercialization of inventions and discoveries arising from research activities of the University, and when appropriate, the pursuit of patents or other intellectual property protection.
- BOR Policy 4.4.1, establishes the copyright policies for the various copyright works and development scenarios that can occur on campus.
- BOR Policy 4.4.2, the patent and technology transfer policy, governs invention disclosure, intellectual property protection, and licensing. This policy outlines the steps that the University can take to protect its Intellectual Property and how the innovator can also benefit.

### ***Ownership of Copyrights in Student Works***

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#### *Theses, Dissertations and Other Student Works*

Students will own the copyrights to their theses, dissertations, and other student works; however, a student must, as a condition to a degree award, grant royalty-free nonexclusive permission to the University to store copies of such works for archival purposes and to reproduce and publicly distribute copies of his or her thesis or dissertation

within the University education and research missions; provided however, that should the student identify any legitimate proprietary interest the student may have in the work, or should the University determine that it has an ownership interest in any patentable or otherwise protectable Intellectual Property interest in the work, the University shall then delay any public access to the work for up to one year following the presentation of the work, in order for the student to consult with the University regarding the protection of the proprietary interest. Copyright ownership of theses or dissertations generated by research that is performed in whole or in part by a student with the support of a sponsor or grant shall be determined in accordance with the terms of the sponsored research or grant agreement, or in the absence of such terms, the copyright shall be owned by the University.

#### *Software, Patentable Subject Matter and Non-Copyright Intellectual Property*

Software, patentable subject matter, and other Intellectual Property contained or disclosed in theses, dissertations and other student works shall be subject to and governed by the policies that apply to University employees.

#### *Student Writings Other Than Theses or Dissertations*

Students shall own the copyrights to all student writings not commonly referred to as theses or dissertations and to other creative expressions required in the course of class assignments. The University shall retain the right to keep original examination scripts and to possess a copy or record of other student works for purposes of assigning grades, maintaining archival materials, and record keeping.

### **Personal Well-being and Effectiveness**

*Wellness* is an interactive process of becoming aware of and practicing healthy choices to create a more successful and balanced lifestyle.

*Resilience* is a skill set of behaviors, thoughts, and actions you can develop to help manage change, hardship, and disappointment. Persisting and growing through adversity enhances flexibility, overall functioning, and well-being.

[Big Red Resilience and Well-Being Resources](#) provides resources, fun events, innovative education, and dynamic services to help students understand emotions, manage stress, build strength, connect with others, develop grit, and navigate transitions

### **Student Performance Expectations**

The faculty mentor or supervisory committee may call a meeting to review a student's performance at any time with a two-week notice.

#### ***Annual Student Progress Report***

All Food Science and Technology graduate students are required to complete an Annual Student Progress Report form and meet with their supervisory committee at least once a year to review progress and discuss future research or project and academic plans.

This annual committee meeting may coincide with completing Supervisory Committee paperwork, Plan of Study paperwork, and/or the Mid-Program Comprehensive Exam in addition to reviewing the Annual Student Progress Report form.

- Admitted in May or August; Supervisory Committee Meeting during Spring semester (due April 15)
- Admitted in January; Supervisory Committee Meeting during Fall semester (due November 15)

At least two weeks before their supervisory committee meeting, students need to email the completed Annual Student Progress Report form to their supervisory committee members and FDST Graduate Coordinator.

If a student fails to submit an Annual Student Progress Report, the student will receive "Unsatisfactory" and placed on probation.

#### *Review Process*

The student will present a summary of his/her past academic and research accomplishments and plans for the future. Supervisory committee members vote and provide feedback if a student's performance is:

1. Satisfactory  
Meets expectations, has made progress, earning grades of B, presented their research and a clear plan for the future
2. Needs Improvement  
Meets some expectations, but has deficiencies in certain areas, i.e., not meeting deadlines, failure to present research at meetings, insufficient reading of the literature, less than adequate writing skills, no clear plan for the future.

If a student receives "Needs Improvement", deficiencies will be discussed and suggestions to overcome those deficiencies will be proposed. This will be documented on the Annual Student Progress Report form.

3. Unsatisfactory  
Does not meet expectations. In addition to the Needs Improvement deficiencies above, student does not spend enough time in the lab, is not synthesizing research concepts, does not use proper controls, and cannot make conclusions from research results; failure to meet with Supervisory Committee once per year

If a student receives "Unsatisfactory", the student will be placed on probation. A written six-month improvement plan must be submitted to the FDST Graduate Committee. The student will provide a written progress report at 3 months, followed by a supervisory committee meeting at 6 months.

At the six-month supervisory committee meeting, all supervisory committee members must approve if the student has completed the plan and is making satisfactory progress. If the student fails to achieve satisfactory status, the student will be terminated from the graduate program.

A written letter or memo must be submitted to the FDST Graduate Committee to report any change in status.

### ***GPA and Grades***

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- FDST graduate student are expected to maintain a 3.0 GPA through their whole program.
- A minimum grade of B is required in all FDST 800 level courses with 400 counterparts.
- A minimum grade of C or P (pass) is required for FDST 900-level courses, FDST 800-level courses without 400 counterparts, or 900-level or 800-level courses used in the minor, collateral, or supporting areas of work.

### ***Academic Integrity***

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Joining the Food Science and Technology graduate program means creating new knowledge to contribute to the food science and technology discipline. Graduate students will work with their faculty mentor and supervisory committee to create an independent research project.

Evidence of [academic integrity](#) violations can result in a probation, termination or dismissal. Students dismissed from the University due to violations of the Student Code of Conduct are ineligible to reapply for graduate study at the University of Nebraska-Lincoln.

### ***Plagiarism***

"Presenting the work of another as one's own (i.e., without proper acknowledgement of the source) and submitting examination, theses, reports, speeches, drawings, laboratory notes or other academic work in whole or in part as one's own when such work has been prepared by another person or copied from another person. Materials covered by this prohibition include, but are not limited to, text, video, audio, images, photographs, websites, electronic and online materials, and other intellectual property." [[UNL Student Code of Conduct](#)]

### ***Preventing Plagiarism Tools (UNL Libraries)***

- [Writing, Citation and Preventing Plagiarism](#)
- [Plagiarism and Citation](#)
- [Plagiarism.org](#)
- [Turnitin](#)

*Other Acts of Academic Dishonesty, including but not limited to the following:*

- Cheating
- Fabrication or Falsification
- Abuse of Academic Materials
- Complicity in Academic Dishonesty
- Falsifying Grade Reports
- Impermissible Collaboration
- Misrepresentation to Avoid Academic Work

*Reporting Violations of Academic Integrity*

Faculty mentors and supervisory committees are required to [report violations of academic integrity](#).

## **Probation and Termination**

### ***Probation***

Students on probation are not eligible for graduate assistantships. The funding will stop within one month of being placed on probation.

Graduate students may be placed on probation under the following conditions:

- Failure complete Annual Student Progress Report and meet at least once a year with supervisory committee, resulting in “Unsatisfactory”
- Receiving “Unsatisfactory” on their Annual Student Progress Report
- Not maintaining a 3.0 GPA or meeting minimum grade requirements ([Scholastic Grade Requirements](#))
- Failure in qualifying examinations, preliminary examinations, comprehensive examinations, or final degree examinations
- Failure to master the methodology and content of one’s field in a manner that is sufficient to complete a successful thesis or dissertation
- Violations of the [Student Code of Conduct](#)
- Violations of [Academic Integrity](#)

The student’s supervisory committee must submit a written six-month improvement plan to the FDST Graduate Committee. If the FDST Graduate Committee approves, the FDST Graduate Committee Chair must communicate it in writing to the Dean for Graduate Studies and the student.

### ***Termination***

Graduate students will be terminated under the following condition:

- Failure to satisfy conditions required for removal of probationary status
- Violations of the [Student Code of Conduct](#)
- Violations of [Academic Integrity](#)

The faculty mentor or supervisory committee must submit a written recommendation for termination to FDST Graduate Committee. If the Graduate Committee approves, the FDST Graduate Committee Chair must communicate it in writing to the Dean for Graduate Studies and the student.

### ***Appeal Procedure***

In all cases, appeals are made in writing to the appropriate advisor, committee, or council.

1. The initial appeal is to the student’s advisor
2. If denied, the appeal may be submitted to the student’s supervisory committee
3. If denied, the appeal may be submitted to the FDST Graduate Committee
4. If denied, an appeal may be made to the campus Graduate Council

The student's written initiation of the appeal must be filed within 30 days following the student's receipt of the official written notification by Graduate Studies. [Full Termination Appeals Procedures](#)

## Enrollment

### How to Enroll

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Students register for courses online through [MyRED](#).

Registration for courses starts in March for summer term and fall semester courses, and in October for spring semester courses. Follow the Office of the Registrar's [Registration Dates](#) to ensure enrollment is done in a timely manner and avoid late registration fees.

The Office of the Registrar offers excellent [Registration Tips and Techniques](#) to help trouble shoot most problems.

Students should use the *FDST* call number when registering for any cross-listed courses.

If a permission code is required for a course, students should first contact the instructor to request a permission code.

### Requirements

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Graduate students should follow the minimum enrollment requirements set by their graduate assistantship, government funding guidelines, student visa status, educational loan deferment program, etc.

Status	Minimum Enrollment Fall or Spring Semester	Minimum Enrollment Summer Term
Full-time Status	9 credits hours	6 credit hours
Eligibility for Graduate Assistantship	1 credit hour	0 credit hours
Exempt from FICA/Medicare Withholding on Graduate Assistantship	4 credit hours	4 credit hours
Access to UNL Services (building door access, libraries, health center, rec center)	1 credit hour	1 credit hour

### Full-Time Certification

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Students may request full-time status certification to enroll in less than 9 credit hours. This is generally used toward the end of a student's degree program allowing them to focus on their research and writing their thesis or dissertation. It saves money for both student and faculty mentor while completing their degree in a timely manner.

#### Application

Students must submit an [online full-time status certification form](#) every semester are enrolled and need full time status while enrolling in less than 9 credit hours.

#### Eligibility

Master of Science with Thesis Students

- Grad Studies approved Memorandum of Courses
- Limitations: may use it no longer than 3 consecutive terms (including summer)

Doctoral Students

- Grad Studies approved doctoral candidacy application
- Limitations: may use it no longer than 24 consecutive months (or 6 consecutive terms, including summer)

*Minimum Credits for FDST Students:*

- FDST 951 for one hour
- FDST 899 or 999 for one hour

### Doctoral Candidacy

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Doctoral students who have achieved candidacy status must be continually enrolled every fall and spring semester until they graduate. Failure to maintain enrollment will result in the termination from the Food Science and Technology graduate program.

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### **Academic Leave of Absence**

An [Academic Leave of Absence](#) may be granted to students for illness or injury, to provide care or assistance for family and dependents, to meet military service obligations, or for other personal reasons. Academic leave of absence can be used to suspend study for one semester up to a full academic year during which the student is not expected to make progress toward their degree.

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### **Withdrawal**

To withdraw from the University of Nebraska-Lincoln, the student should contact their faculty mentor, graduate program coordinator and the Office of Graduate Studies. The Office of Graduate Studies will discontinue their academic program. Please review the Office of the University Registrar's policy on [University Withdrawal](#) and [Cost of Withdrawal](#).

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### **Inactive Student Records**

If a student does not enroll in courses for three consecutive terms (without approved Academic Leave of Absence), their records will be inactivated. They must reapply for admission to enroll in courses and complete their degree or certificate.

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### **Tuition and Fees**

[Graduate tuition and student fees](#) are assessed by the credit hour and the program.

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## **Courses**

- Only courses with 800 or 900 level course numbers can be counted for graduate credit.
- Full course description are available online at <https://catalog.unl.edu/graduate-professional/courses/>

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### **Written English Proficiency**

The English Language Test (ELT) requirement is generally based on TOEFL or IELTS scores:

TOEFL iBT	Writing Score Below 25	Total Score Below 100
IELTS	Writing Score Below 7.0	Total Score Below 7.0

The Office of Graduate Studies will notify the student if they are required to take the English Language Test (ELT) upon their arrival in Lincoln. Students should [Register for the English Language Test](#) and sign-up at the earliest test date that fits the student's schedule. (The sooner the exam is completed, the sooner the student can finalize their course enrollment.) Graduate students take **only the writing portion of the ELT**, which can be completed in one hour.

1. If the student's ELT score is below 85, the student will be placed in ENGL 887, a 3-credit hour course to build English communication skills, emphasizing writing essays and research papers
2. If the student's ELT score is 85 or higher, the student is exempt from any further English language courses

ENGL 887 GESL and/or Academic Research Skills does *not* count toward the student's Plan of Study.

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### **Suggested Research Preparation Courses**

The Food Science and Technology Graduate Committee recommend the following courses to help students prepare for research, especially for students enrolling in FDST 899 and FDST 999.

Students should work with their faculty mentor and supervisory committees to see if any of these courses would be beneficial in their Plan of Study.

- FDST 866 Scientific Method in Practice (fall)
- STAT 801A Statistical Methods in Research: Non-Calculus (fall, spring)
- NRES 800 Sampling, Data Management and Visualization (fall)
- AGRO 803 Scientific Writing and Communication (spring)
- ASCI 896 Independent Study: Grant Writing for Life Science (spring; Cupp)
- [ORED Research Administration Essentials Workshops](#)

**Food Science and Technology Courses**

Dept	UG	GR	Title	Cr. Hrs	Fall Every	Fall Odd	Fall Even	Spring Every	Spring Odd	Spring Even	Summer Every
FDST	401	801	Teaching Applications of Food Science	3							X
FDST	403	803	Food Quality Assurance	3				X			
FDST	405	805	Food Microbiology	3	X			X			
FDST	406	806	Food Microbiology Lab	2	X			X			
FDST	412	812	Cereal Technology	3		X					
FDST	413	813	Baking Technology	3			X				
FDST	414	814	Egg Processing from Science to Technology	3			X				
FDST	415	815	Molds and Mycotoxins in Food, Feed, and the Human Environment	3		X					
FDST	420	820	Fruit and Vegetable Technology	3						X	
FDST	424	824	Food Safety Microbiology	3					X		
FDST	425	825	Food Toxicology	2					X		
FDST	429	829	Dairy Products Technology	3					X		
FDST	430	830	Sensory Evaluation	3		X					
FDST	442	842	Omnivore's Digestive-Tract Microbiome	3				X			
FDST	448	848	Food Chemistry	3	X						
FDST	449	849	Food Chemistry Lab	1	X						
FDST	452	852	Physical Chemistry in Foods								
FDST	455	855	Microbiology of Fermented Foods	2						X	
FDST	455	855L	Microbiology of Fermented Foods Lab	1						X	
FDST	458	858	Advanced Food Analysis	3				X			
FDST	460	860	Food Product Development Concepts	3				X			
FDST	465	865	Food Engineering Unit Operations	3				X			
FDST	470	870	Nutraceuticals and Functional Foods	3						X	
FDST	xxx	xxx	Bioinformatics Skills for Food Genomics	3		X					
FDST	xxx	xxx	Food Safety Auditor	2				X			
FDST		823	Food Safety Risk Analysis	3					X		
FDST		866	Scientific Method in Practice	1	X						
FDST		880A	Food Carbohydrates	2			X				
FDST		880L	Food Lipids	2		X					
FDST		880P	Food Proteins	2						X	
FDST		896	Independent Study	1-5	X			X			X
FDST		899	Masters Thesis	1-10	X			X			X
FDST		908B	Food Borne Pathogens	2					X		
FDST		908E	Readings in Food Microbiology	2						X	
FDST		951	Advanced Food Science Seminar	1	X			X			
FDST		996	Research in Food Science and Technology	1-8	X			X			X
FDST		999	Doctoral Dissertation	1-12	X			X			X

FDST		xxx	Life Cycle Assessment for the Agri-food Sector	1					X		
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### **Great Plains Interactive Distance Education Alliance**

Great Plains Interactive Distance Education Alliance (GP\*IDEA) is a partnership of public universities providing online educational programs and courses. The Department of Food Science and Technology participates with the Food Safety and Defense Certificate.

Because this is a special contract program at UNL, initial enrollment and student billing are handled outside the MyRed system. Enrollment is handled by Dan Cotton, CASNR Distance Education Consortium Coordinator, and billing is handled by UNL's Office of Online and Distance Education.

Students interested in enrolling in these courses should contact Dan Cotton at [dcotton1@unl.edu](mailto:dcotton1@unl.edu) or 402-472-8841 to request appropriate forms and receive a permission code to enroll in MyRED so the course will count toward their program of studies. Once a student has enrolled, a registration confirmation and tuition statement will be mailed to the student's address of record.

Dept	UG	GR	Title	Cr. Hrs	Fall Every	Fall Odd	Fall Even	Spring Every	Spring Odd	Spring Even	Summer Every
FDST		871	A Multidisciplinary Overview of Food Safety and Security	2	K-State						K-State
FDST		872	Principles of Hazard Analysis and Critical Control Point System	2	Iowa State						
FDST		874	Food Laws, Regulations, and the Regulatory Process	2							Iowa State
FDST		877	Advanced Food Microbiology and Biotechnology	3					Univ Missouri		
FDST		878	Food Protection and Defense: Essential Concepts	2				K-State			
FDST		896	Ethnic Food Safety	2							Univ Missouri

### **University of Nebraska Intercampus**

Graduate students are eligible to take courses at the University of Nebraska-Lincoln (UNL), University of Nebraska Omaha (UNO), University of Nebraska at Kearney (UNK) and the University of Nebraska Medical Center (UNMC). Food Science and Technology graduate students wishing to take courses at UNO, UNK or UNMC must fill out an [Intercampus Application](#). A new application is required for each semester the graduate student wants to take a course at a different campus.

- [University of Nebraska Omaha Graduate Courses](#)
- [University of Nebraska at Kearney Graduate Courses](#)
- [University of Nebraska Medical Center Graduate Courses](#)

### **Food Processing Center Workshops**

The UNL Food Processing Center (FPC) offer [professional development workshops](#) to industry partners that students are eligible to enroll in and to receive academic credit. Students must enroll in FDST 896 as well as pay the FPC workshop fee.

## **Resources**

### **UNL Libraries: FDST Research Guide**

There is an online guide to Libraries' resources and services for Food Science & Technology Research Guide available at <http://unl.libguides.com/foodscitech>. (It also links to information from other reliable organizations and services.)

### ***Statistical Cross-disciplinary Collaboration and Consulting Lab (SC3L)***

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The [Statistical Cross-disciplinary Collaboration and Consulting Lab \(SC3L\)](#) is a free service available to students, faculty, and staff at the University of Nebraska who are in need of assistance with a Master's thesis, a PhD dissertation, or faculty research.

### ***Writing Center***

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All members of the UNL community (students, faculty, and staff) are welcome. All forms of communication are welcome, from essays, lab reports, research papers, and journal articles to presentations, cover letters, personal statements, and theses/dissertations. Sign up for appointments by visiting the [Writing Center website](#).

## **Assistantships**

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The Department of Food Science and Technology offers Graduate Research Assistantships (GRAs) and Graduate Teaching Assistantships (GTAs) to qualified students.

Graduate assistantships include a monthly stipend, tuition waiver, and 79% of the University health insurance premium. Students are responsible for ALL student fees plus the student portion (21%) of the University health insurance premium.

### ***Eligibility***

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- Applicants for the Master of Science Degree with Thesis
- Applicants for the Doctoral Degree

When a student applies to the Food Science and Technology Graduate Program, they are automatically considered for graduate assistantships. No additional forms are required.

Students awarded graduate assistantships are expected to will be fully committed to their academic program until graduation.

### ***Appointments***

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Graduate assistant appointments are made on a one-year basis. Appointments are renewable provided the student remains in good academic standing and continue to make satisfactory progress as determined by the student's faculty mentor and supervisory committee.

- Master of Science Degree with Thesis graduate assistantships are awarded for two years.
- Doctoral Degree graduate assistantships are awarded for three years (with MS degree) or five years (without MS degree).

### ***Research Assistantship Responsibilities***

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Graduate Research Assistantships (GRA) are dependent on funding and an open position in a faculty mentor's lab. Most funding come from outside funding agency grants. When a grant is approved, the faculty mentor searches for a well-qualified applicant to work on a specific research project.

Graduate Research Assistants are expected to pursue an academic area and conduct research consistent with the interests of their faculty mentor offering the research assistantship. This combined effort results in a thesis or dissertation for the student, the completion of grant objectives for the faculty mentor, and manuscripts published in scientific journals jointly authored by the student and faculty mentor.

Graduate Research Assistants are directly responsible to their faculty mentor offering the research assistantship. In addition to conducting their own research (FDST 899 or FDST 999), Graduate Research Assistants are expected to assist their faculty mentor with research projects other than their own, special and extension projects, to train other students, and to perform other relevant academic duties.

### ***Teaching Assistantship Responsibilities***

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Graduate Teaching Assistantships (GTA) are directly responsible to Dr. Heather Hallen-Adams and faculty member(s) in charge of the course(s).

Graduate teaching assistants are expected to assist with two 3-hour lab courses per week. This includes time outside the course to attend preparatory meetings scheduled by the supervising faculty, prepare laboratory media and course materials, grade papers as well as in class activities including proctor exams, work with students in laboratory or lecture exercises and answer students' questions.

International students are required to complete [ITA \(Institute for International Teaching Assistants\)](#) unless they earned a degree from an U.S. university or college

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### **Hours**

Graduate assistants are required to work 19.6 hours per week (0.49 FTE) during the length of the appointment. This is in addition to course work and research work for thesis or dissertation. There is no limit to time spent on studies and research relating to the advanced degree.

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### **Benefits**

#### *Eligibility*

- The assistantship appointment must be continuous for 4 full months (or at least 120 days) within the semester.
- Graduate assistants must be admitted to a degree program and be registered for the duration of their appointment.
- Graduate assistantships are annually renewable based on satisfactory performance.

#### *Stipend*

Graduate assistantships include 12-month stipend, paid out in twelve monthly payments.

<i>Year</i>	<i>Master of Science (Thesis) Annual Stipend</i>	<i>Doctoral Degree Annual Stipend</i>
2019-2020	\$ 21,941	\$ 23,286
2020-2021	\$ 22,380	\$ 23,752
2021-2022	\$ 22,827	\$ 24,227
2022-2023	\$ 23,284	\$ 24,712
2023-2024	\$ 23,750	\$ 25,206

#### *Tax Information*

Graduate assistantships are taxable income. Registration is not during the summer term. However, if graduate assistants are not registered for courses, they will be subject to FICA and Medicare taxes (currently 7.65% of their salary).

#### *Tuition*

Graduate assistants are eligible for tuition remission of up to 12 hours per semester work during the academic semesters plus 6-12 hours during the summer.

#### *Student Health Insurance*

Graduate assistantships include basic individual [student health insurance](#) coverage at reduced cost to the student. The University covers 79% of the student health insurance premium. The student health insurance plan covers accidents and illnesses to a maximum of \$250,000 per policy year.

Graduate assistants and international students will be automatically enrolled and billed for the University's health insurance each semester. Once the Office of Student Accounts has generated their semester bill, the student may opt out of student health insurance or waive coverage as an international student. Instructions to accept, opt out, or waive coverage can be found at <https://health.unl.edu/billing/insurancewaiverpolicy>.

International students with "F" or "J" visas registered for classes at UNL are always required to have health insurance coverage unless proof of insurance from an outside source is provided.

### Student Fees

Graduate assistants are responsible for [ALL student fees](#) plus the student portion (21%) of the University health insurance premium. The fee amount will vary depending on which courses are taken. Student fees include access to the UNL library, campus recreation and student health center.

### Resignation or Termination

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- If a graduate assistant decides to resign from the assistantship, they must give 30 days' written notice.
- If a graduate assistantship is terminated, the graduate assistant will receive a 30 days' written notice.

If a student resigns or the assistantship is terminated from the assistantship before completing four full months (or 120 continuous days) of employment in the semester, all tuition and health benefits will be forfeited. The student will be held responsible for the entire cost of those benefits, which will post to their student account.

### Graduate Student Office Space

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Graduate assistants are provided a desk and office area. It is necessary that graduate assistants share an office with other graduate assistants and research staff, located in the Food Innovation Complex (FIC). Graduate assistants are assigned offices based on their research area or advisor.

Graduate students are responsible for maintaining offices, laboratories, and facilities in the Department in an orderly and presentable condition at all times. Offices are not to be used for laboratory experiments or storage of equipment and/or sample materials.

## Fellowships

### Fellowships

- Department of Food Science and Technology ([website to come](#))
- [Agricultural Research Division Fellowships](#)
- [College of Agricultural Sciences and Natural Resources Fellowships](#)
- [Office of Graduate Studies Fellowships](#)
- [Office of Research and Economic Development Funding Opportunities](#)

### Travel Grants

- [IANR Larrick Graduate Student Travel Grant](#)
- [Graduate Student Assembly Travel Award](#)
- [Office of Graduate Studies Travel Grant](#)

## Professional Development Requirements

### Food Science and Technology Seminar Series

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The Food Science and Technology Seminar Series is a weekly series consisting of

- Invited speakers and UNL faculty to showcase current research advances in food science and technology
- UNL staff to share graduate program resources
- FDST graduate students presenting their research

Graduate student research seminar presentations provide the opportunity to develop skills in organizing and presenting technical information to a group of peers and cultivate awareness of current research in food science.

### Requirements

All FDST graduate students are required to enroll in FDST 951, each fall and spring semester. If a student has a course conflict with FDST 951, they are responsible to contact the FDST 951 instructor to let them know.

Degree	Present FDST 951-001 (letter grade)	Attend FDST 951-002 (pass/no pass)
Doctoral*	Make two presentations Enroll when presenting a seminar	Enroll every semester they are not presenting
Master with Thesis	Make one presentation Enroll when presenting a seminar	Enroll every semester they are not presenting

Master without Thesis	Not required	Encouraged to enroll
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\*Doctoral students that presented a seminar during their UNL M.S. degree in FDST need only to present once.

### **Teaching Experience**

Teaching assistants are an integral part of teaching food science and technology concepts within the UNL Department of Food Science and Technology. While a formal seminar presentation is the opportunity to share with peer researchers, teaching assistantships help develop communication skills with student, and eventually the public, who may not be familiar with food science and technology concepts. Being a teaching assistant is a time to shadow and network with faculty as well as develop teaching skills.

#### **Expectations**

- Commit at least 10 hours per week for teaching assistant assignment
- Specific teaching and lab prep responsibilities vary depending upon the course and the instructor supervisor
  - Attend preparatory meetings scheduled by the supervising faculty, prepare laboratory media and course materials, grade papers, proctor exams, work with students in laboratory or lecture exercises and answer students' questions

#### **Requirements**

- Submit Teaching Assistant Experience Request form
  - Once assigned a position, a permission code is sent to the student so they can enroll in FDST 896-002
- Complete required necessary training, such as classroom safety training and classroom instruction
  - International students are required to complete [ITA \(Institute for International Teaching Assistants\)](#) unless they earned a degree from an U.S. university or college
- Submit Teaching Assistant Completion Form
  - At the end of the semester, teaching assistants need to schedule an appointment with their instructor supervisor and/ or lab supervisor to complete an evaluation
  - Email to FDST Graduate Coordinator to receive a grade

<b>Degree</b>	<b>Enroll in FDST 896-002</b>
Doctoral*	Two teaching assistantships
Master with Thesis	One teaching assistantships
Master without Thesis	Not required

\*Doctoral students that completed one teaching assistantship during their UNL M.S. degree in FDST need only to complete one additional teaching assistantship.

Paid Graduate Teaching Assistants may enroll and receive credit in FDST 896-002 for the maximum hours of required for their degree.

### **Publications and Presentations**

In addition to preparation of a thesis and/or dissertation, students are strongly encouraged to prepare manuscript(s) of their research results for publication and/or presentation at scientific meetings. The student will gain valuable experience from the efforts that go into publishing results and presenting scientific papers. The student and faculty mentor work closely on such efforts.

### **Resources and Opportunities**

- [Office of Graduate Studies Professional Development](#)
- Seek out opportunities to present work through oral presentations to the scientific and public, written publications, or organize a hands-on outreach activity
- Attend conferences and use these opportunities to network with others
- Attend seminars and symposiums offer by UNL departments
- Join professional associations and societies
- Pursue leaderships opportunities through the Graduate Student Assembly, IANR Graduate Student Committee, Food Science Club or other Recognized Student Organizations (<https://involved.unl.edu/student-organizations>)

## Graduate Forms

Department of Food Science and Technology

- BOX: <https://unl.box.com/s/0klnx4lq69ramkjm1b0bkhw9ho4ymz3i>

Office of Graduate Studies

- Master's Degree Milestones, Requirements, Forms and Deadlines: <https://www.unl.edu/gradstudies/academics/degrees/masters>
- Doctoral Degree Milestones, Requirements, Forms and Deadlines: <https://www.unl.edu/gradstudies/academics/degrees/doctoral>

## Degree Requirements

### Master's Degree with Thesis Requirements

#### Supervisory Committee

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A student's supervisory committee should be formed by the end of the student's 2<sup>nd</sup> semester (or before completion of 15 credit hours).

#### Requirements

- Minimum of three committee members
- Faculty mentor serves as chair
- At least two must be Food Science and Technology faculty. The third member may be from Food Science and Technology or another department.

*Minor:* Students seeking a minor are required to have a graduate faculty member from the minor program on their Supervisory Committee.

#### Plan of Study

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A Plan of Study consists of courses considered necessary for the student's degree. A Plan of Study is intended to be flexible to meet the educational objectives of the student and to build on previous academic experiences. The student, along with the Supervisory Committee, should select courses that best support the student's research and overall academic program.

A student's Plan of Study should be completed by the end of the student's 2<sup>nd</sup> semester (or before completion of 15 credit hours). Students may not file a Memorandum of Courses and graduate in the same term.

#### Requirements

- Only courses with 800 or 900 level course numbers can be counted for graduate credit
- Minimum of 30 semester credit hours
  - 6-10 hours of FDST 899 Master Thesis credit hours
  - 20-24 hours of regular course work
    - 1 credit hour of FDST 896-002 Teaching Assistant
    - 1 credit hour of FDST 951-001 Presenting
    - 1 credit hour of FDST 951-002 Attending (maximum)
    - 8 credit hours must be 800 or 900 level without 400-level counterparts (excludes FDST 899)
  - At least one-half (15 hours), including thesis credits, must be in Food Science and Technology (FDST)

#### Grades

- FDST graduate student are expected to maintain a 3.0 GPA through their whole program.
- A minimum grade of B is required in all FDST 800 level courses with 400 counterparts.
- A minimum grade of C or P (pass) is required for FDST 900-level courses, FDST 800-level courses without 400 counterparts, or 900-level or 800-level courses used in the minor, collateral, or supporting areas of work.

### *Optional Master's Minor*

- Minimum of 9 credit hours
- Students pursuing a minor should consult with the department issuing the minor to select appropriate courses.

### *Revisions*

- The student emails proposed changes to supervisory committee members, FDST Graduate Chair and FDST Graduate Coordinator.
- Once departmental approvals are received by email, the student's faculty mentor emails the Office of Graduate Studies for approval.

### ***Mid-Program Comprehensive Exam (Research Proposal Defense)***

A student pursuing a Master of Science Degree with Thesis must complete a mid-program comprehensive exam by the end of the student's 3<sup>rd</sup> semester (or before completion of 20 credit hours of coursework, excluding FDST 899). The mid-program comprehensive exam covers both the FDST major and any applicable minor.

The mid-program comprehensive exam consists of a research proposal on the student's intended project that the student will write and then orally defend in front of the student's Supervisory Committee.

The Supervisory Committee Chair (faculty mentor) should be involved in planning and development of the research project but should not edit or rewrite the written research proposal. This document should be an accurate representation of the student's writing and reasoning abilities.

### *Written Research Proposal Requirements*

- 8-12 pages in length and should follow the style prescribed by their adviser (e.g. MLA, APA, Chicago).
- General guidelines for the proposal include: 12-point font, 1" margins, double spacing, pagination, a cover page, citation of sources and a bibliography.
- Submit at least two weeks before the oral defense, email the written research proposal and evaluation form to supervisory committee members, FDST Graduate Chair and FDST Graduate Coordinator

### *Sections*

1. Summary: A brief overview of the full proposal. (less than one page)
2. Justification, Objectives, Hypotheses, and Significance: A short statement of why the research is being done, the overall and specific objectives, the hypotheses being tested, and what the significance of the anticipated results will be. (about one page)
3. Literature Review: The review should be confined to the most relevant articles and be as current as possible. This is not expected to be a comprehensive review but should establish a basis for the intended research. (2-4 pages)
4. Preliminary Results: Include any relevant data (tables, figures).
5. Materials and Methods: Specific procedures, including experimental design, analytical methods, and statistical methods for evaluation of data, should be described. Standard or well-established methods need not be listed but should be referenced. Procedures should be listed in an order corresponding to the objectives. (3-4 pages)
6. Expected Outcomes: A short description of the major results and their significance. (less than one page)
7. Literature Cited: A standard journal format should be used as approved by the supervisory committee.

### *Oral Research Proposal Defense Requirements*

- 20-minute seminar presentation with Supervisory Committee members
- Followed by oral examination by the Supervisor Committee

Areas to be evaluated include the student's knowledge of the science and methods to be used in the project and the student's ability to express his/her ideas orally and to answer questions related to the proposed project.

The supervisory committee members will complete Research Defense Evaluation Forms to provide constructive feedback. The Supervisory Committee may recommend

1. Unconditional approval of the research project proposal
2. Conditional approval (the committee may specify remedial action to improve writing skills, additional course work to improve knowledge in a technical area critical to the research, or other action as necessary)

3. Not approved: The student will be given a second opportunity to prepare and defend a revised proposal within six months.

#### **Reporting Results**

- Copies of the Research Defense Evaluation Forms must be turned into the FDST Graduate Program Coordinator.
- If a student fails to pass the research proposal, the supervisory committee files a report on the failure to the FDST Graduate Chair and FDST Graduate Coordinator. The report must indicate what the student must do before taking another examination. Another examination may not be held during the same term. Only two attempts are permitted unless additional attempts are approved by the FDST Graduate Committee.

#### **Thesis Defense**

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##### **Written Requirements**

- Follow Office of Graduate Studies Written Format Guidelines: <https://www.unl.edu/gradstudies/current/degrees/guidelines>
- Make revisions based on corrections and recommendations after each evaluation

##### **Oral Defense**

- 30-45-minute public seminar presentation, open to faculty, graduate students, and guests
- Followed by oral examination by the Supervisor Committee

##### **Reporting Examination Results**

1. If the committee agrees unanimously that the student has passed: Part 4 of the Final Examination Report is signed by all committee members present for the defense.
2. If only one member dissents: The dissenting member files a letter of explanation to the FDST Graduate Chair, FDST Graduate Coordinator and the Office of Graduate Studies, but the student is approved for the degree and Part 4 of the Final Examination Report is signed accordingly.
3. If more than one member dissents: The student fails to pass the final oral exam. The committee files a report on the failure to the FDST Graduate Chair, FDST Graduate Coordinator and the Office of Graduate Studies, indicating what the student must do before attempting another examination. A student may attempt a final oral exam only once per term.

#### **Time Limit**

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Students must complete their Master of Science degree within 10 consecutive years.

## **Master's Degree with Project Requirements**

#### **Supervisory Committee**

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A student's supervisory committee should be formed by the end of the student's 2<sup>nd</sup> semester (or before completion of 15 credit hours).

##### **Requirements**

- Minimum of three committee members
- Dr. Rossana Villa Rojas serves as chair
- At least two must be Food Science and Technology faculty. The third member may be from Food Science and Technology or another department.

*Minor:* Students seeking a minor are required to have a graduate faculty member from the minor program on their Supervisory Committee.

#### **Plan of Study**

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A Plan of Study consists of courses considered necessary for the student's degree. Plan of Study is intended to be flexible to meet the educational objectives of the student and to build on previous academic experiences. The student, along with the Supervisory Committee, should select courses that best support the student's research and overall academic program.

A student's Plan of Study should be completed by the end of the student's 2<sup>nd</sup> semester (or before completion of 15 credit hours). *Students may not file a Memorandum of Courses and graduate in the same term.*

**Option II Requirements (major and minor):**

- Only courses with 800 or 900 level course numbers can be counted for graduate credit
- Minimum of 36 semester credit hours
  - 4-6 hours of FDST 897 Master Project credit hours
  - 12 credit hours must be 800 or 900 level without 400-level counterparts
  - At least one-half (18 hours), including project credits, must be in Food Science and Technology (FDST)
  - Minor required (minimum of 9 credit hours)
    - Students pursuing a minor should consult with the department issuing the minor to select appropriate courses.
    - The comprehensive exam for the minor may be waived only if all grades in the minor courses are at least a B or P (pass).

**Option III Requirements (major only):**

- Only courses with 800 or 900 level course numbers can be counted for graduate credit
- Minimum of 36 semester credit hours
  - 4-6 hours of FDST 897 Master Project credit hours
  - 18 credit hours must be 800 or 900 level without 400-level counterparts
  - At least one-half (18 hours), including project credits, must be in Food Science and Technology (FDST)

**Grades**

- FDST graduate student are expected to maintain a 3.0 GPA through their whole program.
- A minimum grade of B is required in all FDST 800 level courses with 400 counterparts.
- A minimum grade of C or P (pass) is required for FDST 900-level courses, FDST 800-level courses without 400 counterparts, or 900-level or 800-level courses used in the minor, collateral, or supporting areas of work.

**Revisions**

- The student emails proposed changes to supervisory committee members, FDST Graduate Chair and FDST Graduate Coordinator.
- Once departmental approvals are received by email, the student's faculty mentor emails the Office of Graduate Studies for approval.

**Project Proposal**

*More details to come*

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**Project Minimum Requirements**

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**Preparing the Project**

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**Project Final Exam**

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**Time Limit**

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Students must complete their Master of Science degree within 10 consecutive years.

**Doctoral Degree Requirements**

**Supervisory Committee**

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A student's supervisory committee should be formed by the end of the student's 2<sup>nd</sup> semester (or before completion of 45 credit hours, including master's degree credits). The Doctoral Degree Supervisory Committee form must be submitted with or before the Plan of Study form.

**Requirements**

- Minimum of four committee members
  - It is beneficial to have five members on the committee in the event one member is on sabbatical or is otherwise unavailable.

- Faculty mentor serves as chair
- At least three must be Food Science and Technology faculty
- At least one must be outside the Department of Food Science and Technology but within the University of Nebraska System (UNL, UNMC, UNO or UNK)

*Minor:* Students seeking a minor are required to have a graduate faculty member from the minor program on their Supervisory Committee. The minor representative may serve as the Outside Representative on the committee.

*Readers:* Two readers (outside of the faculty mentor chair) must be selected. It is the readers' responsibility to review and approve the dissertation prior to the Final Oral Examination.

*Special Member:* A faculty member from another institution outside the University of Nebraska system may serve as a fifth committee member on the student's committee. Special members may serve as readers and have voting rights for the student's committee. Only one special member may serve per committee. A special member may not serve as outside representative.

#### *Revisions*

Changes may be made to a Supervisory Committee any time prior to the submission of the Application for Final Oral Exam by submitting the [Change of Supervisory Committee](#) form to FDST Graduate Coordinator to be approved by FDST Departmental Grad Comm Chair, then the Dean of Graduate Studies.

#### *University of Nebraska Faculty Employment Changes*

- If the student has achieved Candidacy, chair change:
  - The former chair who has left the University may continue to serve as co-chair
  - A second co-chair must be appointed
- If the student has not achieved Candidacy, chair change:
  - A new chair of the Supervisory Committee must be appointed immediately
- Graduate faculty with emeritus status may co-chair the supervisory committees of doctoral students or serve as a committee member.
- If a member other than the chair leaves the employ of the University or retires, a replacement should be appointed.
- Faculty granted adjunct faculty graduate status after leaving the University may service as a committee member

#### ***Plan of Study***

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A Plan of Study consists of courses considered necessary for the student's degree. Plan of Study is intended to be flexible to meet the educational objectives of the student and to build on previous academic experiences. The student, along with the Supervisory Committee, should select courses that best support the student's research and overall academic program.

A student's Program of Studies should be completed by the end of the student's 2nd semester (or before completion of 45 credit hours, including master's degree credits).

#### *Requirements*

- Only courses with 800 or 900 level course numbers can be counted for graduate credit
- Minimum of 90 semester credit hours
  - Generally, 40-55 hours of FDST 999 Doctoral Dissertation credit hours
  - Generally, 45-50 hours of regular course work
    - 2 credit hours of FDST 896-002 Teaching Assistant
    - 2 credit hours of FDST 951-001 Presenting
    - 1 credit hour of FDST 951-002 Attending (maximum)
  - At least one-half (45 hours), including thesis credits, must be in Food Science and Technology (FDST)

#### *Transfer Courses*

Students who have a master's degree are generally able to transfer 30 credits of coursework toward the 90 needed for the Doctoral Degree. This is subject to approval by the student's Supervisory Committee and the Dean of Graduate Studies. Prior course work is assessed in relation to its contribution to framing a research foundation for

the degree. Each course accepted must be current and relevant in relation to the desired degree. No graduate credit will be accepted from a previously awarded doctoral degree at any institution, including UNL.

#### *Optional Doctoral Minor*

- Consists a minimum of 15 semester hours
  - 6 credit hours must be 800 or 900 level without 400-level counterparts
- Students pursuing a minor should consult with the department issuing the minor to select appropriate courses.

#### *Grades*

- FDST graduate student are expected to maintain a 3.0 GPA through their whole program.
- A minimum grade of B is required in all FDST 800 level courses with 400 counterparts.
- A minimum grade of C or P (pass) is required for FDST 900-level courses, FDST 800-level courses without 400 counterparts, or 900-level or 800-level courses used in the minor, collateral, or supporting areas of work.

#### *Revisions*

- The student emails proposed changes to supervisory committee members, FDST Graduate Chair and FDST Graduate Coordinator.
- Once departmental approvals are received by email, the student's faculty mentor emails the Office of Graduate Studies for approval.

#### ***Mid-Program Comprehensive Exam (Research Proposal Defense)***

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A student pursuing a Doctoral Degree must complete a mid-program comprehensive exam by the end of the student's 4th semester (or before completion of 50 credit hours of coursework, excluding FDST 999). The mid-program comprehensive exam covers both the FDST major and any applicable minor.

The mid-program comprehensive exam consists of a research proposal on the student's intended project that the student will write and then orally defend in front of the student's Supervisory Committee.

The Supervisory Committee Chair (faculty mentor) should be involved in planning and development of the research project but should not edit or rewrite the written research proposal. This document should be an accurate representation of the student's writing and reasoning abilities.

#### *Written Research Proposal Requirements*

- Written format as a grant proposal for USDA, NIH, or NSF
  - USDA: <https://www.nifa.usda.gov/grants>
  - NIH: [https://grants.nih.gov/grants/about\\_grants.htm](https://grants.nih.gov/grants/about_grants.htm)
  - NSF: <https://www.nsf.gov/funding/preparing/>
  - UNL Office of Research & Economic Development Checklists: <https://research.unl.edu/sponsoredprograms/forms-templates/>
- Submit at least two weeks before the oral defense, email the written research proposal and evaluation form to supervisory committee members, FDST Graduate Chair and Graduate Program Coordinator

#### *Sections of a Grant can include, but not limited to:*

- Bio sketch
- Project Summary or Abstract
- Project Narrative or Description
- Timelines
- Bibliography and References
- Facilities and Equipment
- Budget (encouraged, but not required)

#### *Oral Research Proposal Defense Requirements*

- 30-minute seminar presentation with Supervisory Committee members
- Followed by oral examination by the Supervisor Committee

Areas to be evaluated include the student's knowledge of the science and methods to be used in the project and the student's ability to express his/her ideas orally and to answer questions related to the proposed project.

The supervisory committee members will complete Research Defense Evaluation Forms to provide constructive feedback. The Supervisory Committee may recommend

1. Unconditional approval of the research project proposal
2. Conditional approval (the committee may specify remedial action to improve writing skills, additional course work to improve knowledge in a technical area critical to the research, or other action as necessary)
3. Not approved: The student will be given a second opportunity to prepare and defend a revised proposal within six months.

#### *Reporting Results*

- Copies of the Research Defense Evaluation Forms must be turned into the FDST Graduate Program Coordinator.
- If a student fails to pass the research proposal, the supervisory committee files a report on the failure to the FDST Graduate Chair, FDST Graduate Coordinator and the Office of Graduate Studies. The report must indicate what the student must do before taking another examination. Another examination may not be held during the same term. Only two attempts are permitted unless additional attempts are approved by the FDST Graduate Committee.
- Upon successful completion of mid-program comprehensive exam (research proposal defense), turn in the Application for Admission to Candidacy form into the FDST Graduate Coordinator

#### ***Dissertation Defense***

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##### *Written Requirements*

- Follow Office of Graduate Studies Written Format Guidelines: <https://www.unl.edu/gradstudies/current/degrees/guidelines>
- Make revises based on corrections and recommendations after each evaluation

##### *Oral Defense*

- 45-60-minute public seminar presentation, open to faculty, graduate students, and guests
- Followed by oral examination by the Supervisor Committee

##### *Reporting Examination Results*

1. If the committee agrees unanimously that the student has passed: A Report of Completion is signed by all committee members present for the defense.
2. If only one member dissents: The dissenting member files a letter of explanation to the FDST Graduate Chair, FDST Graduate Coordinator and the Office of Graduate Studies, but the student is approved for the degree and a Report of Completion is signed accordingly.
3. If more than one member dissents: The student fails to pass the final oral exam. The committee files a report on the failure to the FDST Graduate Chair, FDST Graduate Coordinator and the Office of Graduate Studies, indicating what the student must do before attempting another examination. A student may attempt a final oral exam only once per term.

#### ***Time Limit***

Students must complete their Doctoral degree within 8 consecutive years of submitting the Plan of Study (Program of Studies) to the Office of Graduate Studies.

## **Minor in Food Science and Technology**

- Master's Minor consists of a minimum of 9 credit hours
- Doctoral Minor consists of a minimum of 15 credit hours; with 6 credit hours must be 800 or 900 level without 400-level counterparts

#### *Requirements*

- A FDST departmental representative must be a member of the student's Supervisory Committee.
- FDST courses must be taught by Food Science and Technology faculty members.

- FDST 951 Advanced Food Science Seminar may not count toward a FDST minor.
- The comprehensive exam for the minor may be waived only if all grades in the minor courses are at least a B or P (pass).

## Food Safety and Defense Certificate

The Food Safety and Defense Graduate online certificate can complement a graduate degree program or allow food industry professionals to advance their career while working full-time to pursue in-depth specialized training.

The Food Safety & Defense online graduate certificate program is an inter-institutional certificate program being offered as part of the [Great Plains Interactive Distance Education Alliance \(GPIDEA / AGIDEA\)](#), in cooperation with Iowa State University, Kansas State University, and the University of Missouri.

### Requirements

- [Great Plains IDEA Course Planner](#)
- Generally, at least two courses are offered each Fall semester, Spring semester and Summer term
- Depending on the number of courses taken each semester/term, it can take 12-24 months to complete the Food Safety and Defense Certificate

### Grades

- Maintain a 3.0 GPA
- A minimum grade of B is required in all FDST 800 level courses with 400 counterparts (FDST 805 and FDST 855). A minimum grade of C is required for FDST 800-level courses without 400 counterparts (remaining Food Safety and Defense FDST courses).

### Required Core Courses (9 credit hours)

- FDST 805 Food Microbiology (UNL) [prerequisite: college-level microbiology course]
- FDST 871 Multidisciplinary Overview of Food Safety and Security
- FDST 872 Principles of Hazard Analysis and Critical Control Point System (HACCP)
- FDST 873 Food-borne Toxicants/ Food Toxicology

### Elective Courses (select two courses for 4 credit hours)

- FDST 855 Microbiology of Fermented Foods
- FDST 874 Food Laws and Regulations
- FDST 877 Advanced Food Microbiology and Biotechnology
- FDST 878 Food Protection and Defense: Essential Concepts
- FDST 896 Ethnic Food Safety

## Digital Badges

*More details to come*