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DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

Graduate Student Handbook

Revised Autumn 2025

Parker Food Science and Technology Building

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I. INTRODUCTORY INFORMATION

A. Relationship to the Graduate School Handbook

This Department of Food Science and Technology (FST) graduate student handbook supplements the Graduate School Handbook. It outlines specific rules, procedures, policies, and requirements that apply to graduate students, faculty, and programs in the Food Science and Technology graduate program. Reference is made to the appropriate section of the Graduate School Handbook when rules are identical.

B. Degrees Offered and Areas of Specialization

The department offers programs leading to the Master of Science (MS) degree and the Doctor of Philosophy (PhD) degree with options as follows:

- MS Degree: Food Science and Technology. For the MS Degree, both thesis and non-thesis plans are available. MS non-thesis is intended as a terminal degree.
- PhD Degree: Food Science and Technology.

C. Department Faculty and Their Research Areas

Additional information on faculty can be found on the Ohio State Food Science and Technology department website. Faculty are FST graduate faculty and serve as advisors and members of students' advisory committees unless marked with an asterisk (*).

Faculty

Valente Alvarez, Professor & Director, Food Industries Center – alvarez.23@osu.edu Dairy and food processing, research, and extension. Industry-related research projects on new technologies, product development, ingredient functionality, product quality, and shelf life. Food safety, GMPs, Better Process Control School (BPCS), and HACCP training.

Nicole Arnold, Assistant Professor and Field Specialist - arnold.1363@osu.edu Food safety Extension (education, training, support) for consumers, food handlers/retail, entrepreneurs, and food-safety adjacent professionals. Research on consumer perceptions, food labeling, and risk communication often using qualitative or mixed methods. Split appointment in Extension - Family and Consumer Sciences and Food Science and Technology.

V.M. (Bala) Balasubramaniam, Professor – balasubramaniam.1@osu.edu Application of engineering principles in developing alternative preservation methods (such as high-pressure processing, pressure-ohmic thermal sterilization, high-pressure homogenization) to solve food safety, quality, and nutritional challenges. Food manufacturing plant dry sanitation technologies. Mathematical models for food safety and quality. *In-situ* sensors for food property research. Process validation of novel preservation technologies. Data Science applications in food processing.

Sheryl Barringer, Professor – barringer.11@osu.edu Flavor volatiles, especially in response to processing. Fruit and vegetable processing, especially tomatoes. FST Graduate Studies Chair.

Martha Belury, Department Chair and Professor – belury.1@osu.edu Conducts translational biologic research to elucidate the cellular mechanisms of nutrients and bioactive food components, e.g., lipids, flavonoids, etc., in regulating energy metabolism and inflammation. Pathways that involve mitochondrial function and insulin sensitivity in the liver, adipose and muscle tissues are of special interest. Human health conditions affected include obesity, insulin resistance, type 2 diabetes, sarcopenia, cancer cachexia, and heart failure.

Osvaldo Campanella, Carl E. Haas Endowed Chair in Food Industries – campanella.20@osu.edu Extrusion of food and non-food biomaterials, Food Engineering, Material Science and Rheology applied to biomaterials, Food Processing Modeling.

Louise Campbell,* Senior Lecturer – campbell.2127@osu.edu Product development, sensory consumer research, quality and consulting with food, flavor, biotech, and restaurant industries.

Jessica Cooperstone, Associate Professor – cooperstone.1@osu.edu Targeted and untargeted metabolomics techniques on plants, foods, and biological samples. Understanding bioactivity *in vivo* using pre-clinical and human models. Split appointment in Horticulture and Crop Science as well as Food Science and Technology.

M. Monica Giusti, Distinguished Professor – giusti.6@osu.edu Functional foods, phytonutrients, natural colorants. Chemistry and functionality of flavonoids with emphasis on anthocyanins as food colorants and bioactive compounds, and other phenolics, such as isoflavones and proanthocyanidins. Appointment in OSU Interdisciplinary Graduate Program in Nutrition.

Emmanuel Hatzakis, Associate Professor – chatzakis.1@osu.edu Applications of Nuclear Magnetic Resonance spectroscopy (NMR) and metabolomics in food science with an emphasis on food safety, food authentication, and nutrition.

Dennis R. Heldman, Dale A. Seiberling Endowed Professor of Food Engineering – heldman.20@osu.edu Food engineering with emphasis on process analysis and design as applied to processes throughout the food supply system. Specific focus on outcomes contributing to maximum conversion of raw materials and ingredients into safe and high-quality food products for consumers. Application of simulation models to ensure food safety and efficient use of natural resources, while improving product quality attributes.

Rafael Jimenez-Flores, J.T. 'Stubby' Parker Endowed Chair in Dairy Foods – jimenez-flores.1@osu.edu Dairy Food Science, Technology, Processing, and Molecular Biology. Chemistry and biochemistry of milk and dairy food components, application of molecular biology to assess biologically active compounds from milk and dairy in the areas of health and wellness. Proteomics and metagenomics applied to dairy.

Lynn Knipe, Associate Professor – knipe.1@osu.edu Processed meat extension for the Ohio meat industry. Muscle quality and ingredient functionality in further processed meats. Meat product safety, particularly intervention practices against pathogens in production, retail, food service, and consumer handling and preparation. Joint appointment in Animal Sciences.

Srilatha Kolluri,* Senior Lecturer – kolluri.4@osu.edu Student recruitment and outreach. The Science of Food and Chocolate Science instructor.

Jiyoung Lee, Professor – lee.3598@osu.edu Harmful algal blooms and cyanotoxins, with emphasis on emerging health risks with an interdisciplinary approach, including metagenomics, metabolomics, and geospatial tools. Microbiome in environments and hosts. Microbial source tracking and zoonotic pathogen transmission. Water-food-climate nexus. Joint appointment in Environmental Health Sciences, College of Public Health. Appointment in the OSU Environmental Science Graduate Program.

Farnaz Maleky, Associate Professor – maleky.1@osu.edu Nano-Science and physio-chemical properties of food, food material science and engineering, lipids chemistry & structuring fatty food, and mathematical modeling of food systems.

Melvin Pascall, Professor – pascall.1@osu.edu Food packaging with emphasis on integrity, modified atmospheric packaging, nanotechnology and plastics, migration/scalping edible packaging, packaging material sanitization, and food safety.

Devin Peterson, Distinguished Professor – peterson.892@osu.edu Flavor chemistry with emphasis on the identification chemical stimuli (taste, aroma, somatosensory), investigation of multi-flavor interactions on perception, characterization of pathways of flavor generation/stability and mechanisms of flavor delivery. Director of the Flavor Research and Education Center, http://frec.osu.edu; Director of the Foods For Health Discovery Theme, https://discovery.osu.edu/foods-health.

Mary Kay Pohlschneider*, Assistant Professor of Professional Practice – pohlschneider.1@osu.edu Internship Coordinator. Student recruitment and outreach, chocolate, meat processing, food safety, and HACCP.

Luis E. Rodriguez-Saona, Distinguished Professor – rodriguez-saona.1@osu.edu Application of Fourier Transform Infrared (FT-NIR and mid-IR) spectroscopy in the field of food safety and quality assurance. Development of predictive models for the rapid detection, identification, and classification of chemical & microbial contaminants and food components with biological activity.

Christopher T. Simons, Associate Professor – simons.103@osu.edu Sensory evaluation and psychophysics. Methodology development. Neural and physiological underpinnings of sensation, reward, and consumer decision. Functional and cognitive benefits of flavors and food ingredients.

Yael Vodovotz, Professor – vodovotz.1@osu.edu Bread staling, physico-chemical properties of carbohydrate systems and functional foods, water mobility and functional properties of food

components, material properties of biopolymers and bioplastics. Appointment in OSU Interdisciplinary Graduate Program in Nutrition & Comprehensive Cancer Center.

Hua (Helen) Wang, **Professor –** wang.707@osu.edu Antibiotic resistance and targeted mitigation, gut microbiota dysbiosis, related diseases and targeted damage repair; microbial ecosystems in foods and hosts, biofilms, lactic acid bacteria and Listeria monocytogenes, rapid detection of microorganisms. Appointment in OSU Microbiology and Interdisciplinary Graduate Program in Nutrition.

Brian Waters,* Senior Lecturer – waters.200@osu.edu Alcoholic beverages (emphasis on history, general production, and sensory), brewing, chocolate, food safety, chlorine-based sanitizers (emphasis on electrolyzed oxidizing water), academic program assessment coordinator.

Ahmed Yousef, Professor and Bazler Designated Professor in Food Science – yousef.1@osu.edu Food microbiology focusing on decontamination of food with gaseous sanitizers, the discovery of novel antimicrobial preservatives, and safety of food processed by emerging technology.

Courtesy Faculty

Joshua Bomser, Associate Professor – jbomser@ehe.osu.edu Nutrition education and functional foods. Courtesy, with Human Nutrition.

Mark Failla, Faculty Emeritus – mfailla@ehe.osu.edu Absorption, metabolism, and health-promoting activities of food phytochemicals. Courtesy, with Human Nutrition.

Gonul Kaletunc, Professor – kaletunc.1@osu.edu Thermal and rheological properties of food and biological materials. Encapsulation of beneficial compounds for targeted and controlled-release delivery. Ultrasonicated compression. Development of food formulations for 3D printing. Courtesy, with Food Agricultural and Biological Engineering.

Rachel Kopec, Professor – kopec.4@osu.edu Nutrient-nutrient/nutrient-bioactive interactions during food processing, human digestion and metabolism (u.osu.edu/kopec.4/). Courtesy, with Food Agricultural and Biological Engineering.

Jianrong Li, Professor – li.926@osu.edu Food and waterborne viruses, viral detection, food safety, viral replication and gene expression, vaccine, and anti-viral drug development. Courtesy, with Veterinary Biosciences.

Gireesh Rajashekara, Professor – rajashekara.2@osu.edu Pre-harvest control of bacterial zoonoses specifically, *Salmonella* and *Campylobacter,* novel antimicrobial approaches, antimicrobial resistance (AMR) mitigation, agriculture microbiome, and malnutrition and enteric dysfunction. Courtesy, with Food Animal Health Research Program.

Linda Saif, Distinguished University Professor – saif.2@osu.edu Development of vaccines,

antivirals, and adjuvants including probiotics and micronutrients for enteric and respiratory or foodborne viruses. Diagnosis, epidemiology/interspecies transmission, pathogenesis and immunity of zoonotic and foodborne enteric and respiratory viral infections in animals including caliciviruses, rotaviruses, and coronaviruses. Courtesy, with Food Animal Health Research Program.

Sudhir K. Sastry, Professor – sastry.2@osu.edu Ohmic heating and moderate electric field processing of foods; effects of electric fields on enzymes and bacterial spores; fresh produce safety. Courtesy, with Food, Agricultural and Biological Engineering.

Daniel Spakowicz, Assistant Professor – Daniel.Spakowicz@osumc.edu Dietary modification of the microbiome to improve cancer treatment outcomes. Courtesy, with James Cancer Hospital and Solove Research Institute

Macdonald Wick, Professor – wick.13@osu.edu Meat biochemistry. Courtesy, with Animal Sciences.

S.T. Yang, Professor – yang.15@osu.edu Fermentation and bioseparation research, bioreactor design, enzyme technology, and metabolic engineering. Courtesy, with Chemical Engineering.

Adjunct Faculty

Ronald D. Harris,* Adjunct Professor – harris.568@osu.edu Food product development, management of R&D, decision sciences, operations management.

Benoit Rousseau,* Adjunct Professor – Sensory Science.

II. GRADUATE STUDIES COMMITTEE

The department's Graduate Studies Committee is selected and operates according to the rules of the Graduate School Handbook and department Pattern of Administration. The roles and responsibility of the department's Graduate Studies Committee are listed in the Graduate School Handbook.

A. Petition/Appeal Process

Graduate students are expected to follow the rules of the Graduate School and of the Food Science Graduate Program presented in this handbook. A student who believes that circumstances warrant a waiver of a rule may submit a petition to the Graduate Studies Committee.

Petition/Appeals regarding the department's graduate programs, policies, and rules must be made in writing by the student requesting the waiver of a specific rule. The request must describe the circumstances, and must include written statements from the student's advisor and the course instructor (if appropriate), reacting to the student's request and providing any additional information pertinent to the waiver request. If necessary, the Committee will conduct a hearing

with the student and the student's advisor. The outcome will be reported in writing to the parties involved.

Should the student decide to continue the Petition/Appeal to the Executive Committee of the Graduate Council, the Graduate Studies Committee Chair will report the Committee's position to the Executive Committee.

III. ADMISSION

Departmental graduate admission policies and procedures follow those of the OSU Graduate School and the university. Additional specific information is listed below.

A. Criteria and Credentials

To enter the FST graduate program, students must have at least one semester of college-level calculus, biology, microbiology, physics, chemistry through organic chemistry, and biochemistry, or have obtained the equivalent through training or experience.

Admission to graduate school is competitive. The minimum GPA for admission is 3.0 (on a 4-point scale) in all previous undergraduate and graduate work. Applicants with lower graduate grade-point averages may be admitted conditionally by petition to the Graduate School. Past performance in basic science courses (math, chemistry, physics) and recommendations from previous instructors or advisors are important criteria for admission.

Qualified students may be denied admission when their academic goals are not aligned with those of the department or when advisors, space, or facilities to accommodate the students are unavailable.

Students who wish to transfer to the Food Science and Technology Graduate Program from another academic unit must meet the admission criteria listed above. A student wishing to transfer must submit a letter from a faculty member willing to serve as the student's advisor. Graduate-level courses completed in the other academic units are accepted toward the Food Science and Technology degree if these courses meet the FST program requirements.

To apply, students must fill out an online application form and have their TOEFL scores (if applicable), and a copy of their official transcripts from all university-level schools attended sent directly to the Ohio State Graduate Admissions Office. Students will also be required to upload three (3) letters of recommendation, a current resume/CV, and a Statement of Intent. The letters of recommendation should be on company or university letterhead. The letter of intent should describe the area of research the student would like to pursue, as well as any relevant internships or research experience.

B. Application Deadlines

Application deadlines for admission to the department are those set by the university. All

application material must be submitted by the deadline to assure a decision regarding admission for the desired term. Complete applications received by December 1st for autumn admission will be considered for university fellowship nomination by the department.

IV. ADVISOR

A. Assignment of Advisor

Graduate students are assigned an advisor when admitted into the program. If a student wishes to add a co-advisor or change their advisor, they must submit a change of advisor petition to the Graduate Studies Committee. The petition must include statements from both the present and the prospective advisors, stating their position on the change. If approved, an advisor change will occur at the end/beginning of a term. This form must be turned in to the graduate program at least a week before the change becomes effective. The student should be aware that changing advisors may affect funding and their graduation timeline. If the student has chosen to change advisors after the first semester in the program, the Graduate Studies Chair may determine that a meeting is needed to discuss the change and ensure that both the former advisor and new advisor agree. If the consent of one or both advisors cannot be obtained, the student may petition the Committee in writing. The action of the Committee will be based on consultation with the student and their present and prospective advisors.

B. Role and Responsibility

The graduate advisor provides counsel and advice to the student on course selections, individual program development, and selection of research topics, and execution of the student's research and educational goals. The graduate advisor also assists with all other student requests that require assistance.

The advisor of a master's or doctoral student must hold Graduate Faculty membership at the appropriate level (at least Category M for a master's student and only Category P for a doctoral student) in the Food Science and Technology Graduate Program. Junior faculty joining our graduate program will start with M status and can request P status after they: (1) advise a student to completion of an MS degree and (2) have served on a PhD student committee for at least one year.

In the first semester of the student's program, the student's Advisory Committee will be chosen by the advisor and student, and communicated to the department Academic Program Manager. The Advisory Committee consists of the advisor plus a minimum of two additional faculty member for the MS, or advisor plus a minimum of three additional faculty members for the PhD. At least one of these committee members, aside from the advisor, must be a full (not adjunct or courtesy) faculty member of the Food Science and Technology department. All advisory committee members must be graduate faculty at OSU. Non-graduate faculty may serve as supplemental members to the committee but do not count towards the number requirement. The Advisory Committee serves to (l) approve the student's course program and changes in the program, (2) consult on progress in research, and (3) participate in the student's Examination

Committee. **All students must have their course program approved by their Advisory Committee before the end of their first term of enrollment.** After the meeting of the Advisory Committee, the course program must be sent to the Academic Program Manager, who will send it through DocuSign to be officially approved by the committee. Students who fail to meet this requirement will be denied further registration.

V. COURSE REGISTRATION AND SCHEDULING

The department's rules concerning registration, scheduling, course load, and changes in schedule are the same as those stated in the Graduate School Handbook. Throughout this document, credit hours refer to graduate-level credits only (5000 and above in FST, 4000 and above in other departments and taught by faculty members). For classes offered at both graduate and undergraduate levels, graduate students must make sure to register for the graduate-level section of the class (typically 10XX section). Undergraduate credits do not meet department or university requirements for graduate programs. English as a second language courses (any courses in EDUTL) do not count toward the department requirements.

In this department, 18 credit hours per semester is considered a full-time course load. All Graduate Fellows and Graduate Associates must enroll for 18 credit hours per autumn and spring semester, and 15 credit hours during the summer term.

The department maintains a file on each student that contains: all application materials; a record of the student's academic performance at The Ohio State University; a record of the student's completed safety training, copies of the approved course schedule, and research proposal; copies of all official correspondence and forms from, to, or about the student from the advisor, the Graduate Studies Committee, the department, the Graduate School, and other faculty members and administrative units of the university.

VI. COURSE CREDIT, MARKS, POINT-HOUR RATIO

A. Course Credit

Rules in the Graduate School Handbook apply.

B. Marks (Grades)

Rules in the Graduate School Handbook apply with the exception that EM credit may be earned only in undergraduate courses. EM credit will be awarded for grade B or better performance.

All formal courses offered by the department, Group Studies, and Seminar are graded A–E. All Individual Studies and Research courses are graded S/U.

Credit for work at other institutions may be transferred as outlined in the Graduate School Handbook.

C. Point-Hour Ratio

Rules in the Graduate School Handbook apply. A course may be repeated with the advisor's approval when mastery of the subject matter is critical to the student's performance in major area courses and research, or if the grade in the course was the result of absence beyond the student's control.

A Fresh Start option may be granted to students enrolling after a five-year absence upon petition to the Graduate Studies Committee.

VII. ACADEMIC STANDING

Rules in the Graduate School Handbook Academic and Professional Standards section apply to good standing, probation, dismissal, reinstatement, reasonable progress, and denial of further registration.

A. Required Committee Meetings

Concerning reasonable progress, a course plan must be developed and approved by the Advisory Committee within the first term of the student's program. This course plan should identify likely dates for Proposal Defense, Candidacy (for PhD students) and Final Oral Exams, as well as the expected graduation time. The student and advisor are expected to meet regularly to determine goals for Thesis/Dissertation research progress. A student who meets or demonstrates good faith in reaching established goals in coursework and research is considered to be making reasonable progress.

B. Internships

Any internships must be approved by the advisor and be accompanied by a written agreement that lists the impact of the internship on time to graduation, course credits, stipend (if applicable), proprietary information, and publication rights. Students must communicate internships to the Academic Program Manager before the end of the semester prior to the internship start date. Students cannot be on an internship during the semester that they are on a GRA appointment. Internships may not be taken mid-semester if the student is on a GRA appointment unless the student has been terminated from their appointment before the start of the term.

C. Conflict Resolution

If a student or their advisor experience problems or conflicts related to advising and the graduate program, the two should meet to discuss the issue, and document it with a follow up email. If this does not resolve the conflict, the issue should be discussed with the Graduate Studies Chair. If this does not resolve the matter, the department chair should be consulted to resolve the issue.

VIII. REQUIRED SAFETY TRAINING

All graduate students are required to complete safety training. There are two required courses:

1. Lab Standard Training
2. OSU BEAP **(Building Emergency Action Plans)**

The two courses listed above are offered every fall during the new graduate student orientation in the Parker Food Science building. They can also be taken online through the Environmental Health and Safety web page. Once completed, the student needs to give the Academic Program Manager and their lab safety manager a copy of the certificates indicating they have passed. For instructions on how to complete the courses online, please see the "Required Training" handout that is included at the end of the handbook and posted on the FST website. Depending on the work performed in the laboratory, students may be required to go through additional safety training.

IX. REQUIRED HUMAN SUBJECTS APPROVAL

If you want to conduct research on humans (including yourself) at The Ohio State University, you MUST FIRST (1) pass an online course and (2) obtain approval from the Office of Responsible Research Practices. Human research includes surveys, taste tests, and other related activities. There are 3 levels of review a study involving humans can undergo: full board, expedited, and exempted. Only a few categories of research qualify as exempted. Fortunately, most surveys or sensory evaluation studies fall into the category of exempted research. Specifically, much of this work falls into category #6, which is defined as:
Taste and food quality evaluation and consumer acceptance studies,

a. if wholesome foods without additives are consumed; **OR**
b. if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

HOWEVER, just because your proposed research falls into the "exempted" category, this does not mean that you do not need to obtain approval. YOU cannot decide your proposal is exempt; you can only suggest that it should be. It is up to the ORRP to determine if it is exempt. Their policy is summarized in the following quote, taken from their website:

> "Research involving human subjects may be exempt from federal regulations requiring IRB review. The Ohio State University Human Research Protection Program (HRPP) is responsible for determining whether research involving human subjects meets the criteria for exemption in accordance with applicable regulations. Investigators may not make this determination". *IRB Policy Committee, rev May 2012.*

Exempt research is generally short term in nature. It usually is performed "as written," meaning the investigators do not plan to make changes in the research design, the selection of subjects, the

informed consent process, or the instrumentation during the study. A determination that research is exempt does not absolve the investigators from ensuring that the welfare of human subjects participating in research activities is protected and that methods used and information provided to gain subject consent are appropriate to the activity. Investigators may not solicit subject participation or begin data collection until they have received approval from the appropriate Institutional Review Board OR written concurrence that research has been determined to be exempt.

If you are going to conduct research on humans, you MUST take and pass a web-based course. This rule applies to the faculty advisor AND the graduate student performing the test. This course can be accessed from http://orrp.osu.edu/irb/training-requirements/citi. Please follow the CITI Access Instructions posted on the ORRP website. For most people in this department who conduct taste tests and surveys, it will be sufficient to complete the basic course for social and behavioral researchers (group 2). More advanced nutrition studies may require the completion of the biomedical course (group 1). A refresher course is required every 3 years. The entire course takes 2–3 hours, but it is broken down into modules and you can enter and exit the site as often as you like if you do not want to complete it all at once.

To apply for IRB exemptions, you will need to submit a request using the Buck-IRB online system (https://orapps.osu.edu/buck-irb/). Questions regarding exempt research should be directed to exemptinfo@osu.edu or phone (614) 688-0389. Further information can be found at http://orrp.osu.edu/irb/investigator-guidance/exempt.

X. MASTER'S DEGREE PROGRAMS

Rules governing the department's Master's Degree Programs are outlined in the Graduate School Handbook. The FST graduate program does not have a foreign language requirement. Specific conditions are stated below.

A. Program of Study

The student must have an advisor and an Advisory Committee. The Advisory Committee consists of a minimum of 3 members of the graduate faculty, including the advisor. At least one of these committee members, aside from the advisor, must be a full (not adjunct or courtesy) faculty member of the Food Science and Technology department. All committee members must have Graduate Faculty status at The Ohio State University. Once the student and their advisor agree on a list of courses, the student will meet with their Advisory Committee to discuss and approve the course outline. This is also a good opportunity to discuss research plans with the committee. This course plan must be approved by the student's Advisory Committee and submitted to the Academic Program Manager **before the end of the first term of enrollment**. Please use the Course Plan form at the end of this handbook or on the website to develop your course plan. There are two options for the MS degree: MS thesis and MS non-thesis. Most students, and all students receiving a stipend or fellowship, pursue the MS thesis degree. Other students, including part-time students, may choose to pursue an MS non-thesis degree, which is a terminal degree and cannot be followed up with a PhD degree.

MS Thesis

Students in the MS thesis program must take a minimum of 30 graduate credit hours to graduate. These 30 graduate credit hours must include at least 20 course credit hours with at least 12 of these course credit hours in FDSCTE. FDSCTE 7193 (individual studies) and 7999 (research) are non-course credit hours. In addition, a minimum of 6 course credit hours must be 6000 level or above with at least 4 of these 6000 level or above credits in FDSCTE. English as a second language courses (any courses in EDUTL) do not count toward graduate credit requirements. Courses from FDSCTE must be 5000 level or above, and courses from other fields must be 4000 level or above and taught by a faculty member to receive graduate course credit. Students must register for the 10XX section of dual-level courses for them to count towards graduate course credit. Sections identified with a 00XX number are undergraduate level only. It is highly recommended that all students take a statistics course.

Every student must take FDSCTE 8991 (recommended during their first autumn semester) and FDSCTE 8992 in their final semester (autumn or spring). Students will present their research results during FDSCTE 8992.

All students who plan to obtain a graduate degree from the Food Science and Technology graduate program must achieve a minimum competency in the following three categories. This competency can be achieved by a grade of B or higher in at least one course from each of the following three categories or is demonstrated by equivalent knowledge acquired from other sources such as a similar course completed elsewhere, demonstrated proficiency, or real-world practical experiences. The equivalence must be indicated in the course plan by the student's advisor and approved by the Advisory Committee. The assessment of competency is determined by the student's Advisory Committee. If the student receives a B- or lower in one of the courses meeting the competency requirement, the advisor may petition the Graduate Studies Committee for approval. Petitions must be received by the following semester. Courses listed below with no prefix are FDSCTE. Courses below the 4000 level do not receive graduate credit but can add competency.

A. Food Chemistry: 5600, 5610
B. Food Engineering and Processing: 5400, 5410, 5420, 5430, MEATSCI 4510
C. Food Microbiology: 5536, 5546

Once the student and their advisor have agreed upon a list of courses, the student will meet with their Advisory Committee to discuss and approve the course outline. This meeting must take place during the **first term of enrollment**. The Course Plan form (found at the end of this handbook and the website) will be approved by the Advisory Committee and submitted to the Academic Program Manager by the end of the first semester.

MS Non-thesis

Students in the MS non-thesis program must take a minimum of 30 graduate credit hours to graduate. These 30 graduate credit hours include a minimum of 26 course credit hours, with at least 14 of these course credit hours in FDSCTE. It also includes a minimum of 4 credit hours of FDSCTE 7193 (individual studies). FDSCTE 7193 (individual studies) and 7999 (research

credits) are non-course credit hours. In addition, a minimum of 6 course credit hours must be 6000 level or above with at least 4 of these 6000 level or above credits in FDSCTE. English as a second language courses (any courses in EDUTL) do not count toward graduate credit requirements. Courses from FDSCTE must be 5000 level or above, and courses from other fields must be 4000 level or above and taught by a faculty member to receive graduate course credit. Students must register for the 10XX section of dual-level courses for them to count towards graduate course credit. Sections identified with a 00XX number are undergraduate level only. MS non-thesis students may not receive a graduate stipend or fellowship.

Every student must take FDSCTE 8991 (recommended in their first autumn semester) and FDSCTE 8992 in their final semester (autumn or spring). Students will be presenting original research data (their data when possible) during FDSCTE 8992. It is highly recommended that every student takes a statistics course.

Students who plan to obtain an MS non-thesis graduate degree from our Food Science and Technology graduate program must achieve a minimum competency in the following five categories. This competency can be achieved by a grade of B or higher in at least one course from each of the following five categories or is demonstrated by equivalent knowledge acquired from other sources such as a similar course completed elsewhere, demonstrated proficiency, or real-world practical experiences. The equivalence must be indicated in the course plan by the student's advisor and approved by the Advisory Committee. The assessment of competency is determined by the student's Advisory Committee. If the student receives a B- or lower in one of the courses meeting the competency requirement, the advisor may petition the Graduate Studies Committee for approval. Petitions must be received by the following semester. Courses listed below with no prefix are FDSCTE. Courses below the 4000 level do not receive graduate credit but can add competency.

A. Food Chemistry: 5600, 5610
B. Food Engineering and Processing: 5400, 5410, 5420, 5430, MEATSCI 4510
C. Food Microbiology: 5536, 5546
D. Nutrition and Biochemistry: HUMNNTR 2310, HUMNNTR 4609, BIOCHEM 4511
E. Integrated: 5710, 5720, 5730

Once the student and their advisor have agreed upon a list of courses, the student will meet with their Advisory Committee to discuss and approve the course outline. This meeting must take place during **the first term of enrollment**. The Course Plan form (found at the end of this handbook and the website) will be approved by the Advisory Committee and submitted to the Academic Program Manager.

B. Plans, Requirements, Time Limit

As indicated above, the department offers the MS thesis and MS non-thesis, for which a minimum of 30 credit hours are required. Normally, students pursuing MS thesis can expect to take 40–60 credit hours of research in addition to the 20 course credit hours. All students must register for at least 3 credit hours during the semester of graduation.

Graduate students who wish to transfer to this department from other institutions must complete

24 of their 30 required graduate credits at The Ohio State University over a period of at least two semesters. If credits are being transferred from another university to count toward a graduate degree, they should be transferred at the time the student is admitted but no later than the end of the first term of enrollment in the Graduate School.

C. Master's Examination and Thesis

The term a student expects to graduate, they will need to submit an electronic Application to Graduate to the Graduate School no later than the third Friday of that term. Students need to update their approved course plan and get their advisor's signature indicating that the course plan was completed.

The Examination Committee for the MS degree in Food Science and Technology consists of at least three faculty members, including the candidate's advisor. Normally the student's Advisory Committee constitutes the Examination Committee. Changes in the Examination Committee may be made upon request from the student, advisor, or members of the Graduate Studies Committee and with the approval of the Graduate Studies Committee.

The student must submit a copy of their thesis to their committee, either electronically or printed. The student is responsible for sending information regarding their defense to the Academic Program Manager to announce their public exit seminar a minimum of **7 days** before their defense.

MS Thesis

The MS thesis examination begins with a research presentation. The presentation should be announced at least 7 days in advance and will be open to the public. Students must send announcement details (title, advisor, date, and location for the seminar) to the Academic Program Manager 7 days prior to the defense. The presentation lasts a maximum of 45 minutes and includes a 20–35-minute presentation followed by a maximum of 10 minutes of questions. The exam continues with a closed-door examination by the student's committee, lasting 60–90 minutes. The start of the presentation to the end of the examination is two hours. The committee is required to attend the entire exam, including the presentation. The closed-door portion of the exam includes a defense of the thesis and general subject matter examination. The subject matter portion covers principles of food science and technology, which should be familiar to the candidate from course work. The student must submit a copy of their thesis to their committee a minimum of 1 week before their defense, unless determined otherwise by their committee.

If a student's thesis research project is funded by a company and governed by an industry-sponsored research agreement with the university that contains confidentiality language, the advisor will submit a request to the company for the student to publicly present their results at the time the Application to Graduate form is submitted. If the company denies the request, the advisor will inform the Graduate Studies Committee (GSC) and the student will have a confidential, closed exit seminar, with only the committee present.

MS Non-thesis

The MS non-thesis examination consists of a 4-hour written section and an oral examination, including a public presentation. The written portion is designed to test the student's knowledge of food science and other subject matter. The questions are submitted by faculty members to the student's advisor, who prepares and administers the examination. The student's answers are evaluated individually by the faculty members who have submitted the questions and overall by the Examination Committee.

The MS non-thesis examination begins with a presentation. The presentation can be on the research project or a literature review. It should be announced at least 7 days in advance and will be open to the public. Students must send announcement details (title, advisor, date, and location for the seminar) to the Academic Program Manager 7 days prior to the defense. The presentation lasts a maximum of 45 minutes and includes a 20–35 minute presentation followed by a maximum of 10 minutes of questions. The exam continues with a closed-door examination by the student's committee of no less than 1 hour. The start of the presentation to the end of the examination is two hours. The committee is required to attend the entire exam, including the presentation. The closed-door portion of the exam includes a defense of the student's study project review. A synopsis of the project, with premise, objectives, procedures, and results, must be submitted to the members of the Examination Committee 7 days before the scheduled examination date. The remainder of the oral examination is devoted to subject matter for clarification and supplementation of answers to the written questions.

Other rules of the department concerning the MS examination and the thesis, including judgment and decisions on the student's performance, are covered in the Graduate School Handbook.

XI. DOCTORAL DEGREE PROGRAMS

The rules outlined in the Graduate School Handbook apply specifically to the department's Doctorate Degree programs. Selected rules and conditions are highlighted as follows:

A. Program of Study

The Food Science and Technology department offers a program leading to a Doctoral Degree. Students entering the PhD program are expected to hold an MS Degree; however, direct admission to the PhD and transfer from the MS program without completing the MS may occur no later than the end of the first two weeks of the 5th semester with the support of the student's advisory committee and approval of the Graduate Studies Committee. Requests are made through the MS to PhD Transfer Form. The form must come from the student's advisor, outline the student's academic and research excellence, and be signed by the student and the advisory committee members. Strong candidates for transfer to the PhD program will have a 3.5 GPA or higher and demonstrated research experience.

All students who plan to obtain a PhD degree from our Food Science and Technology graduate program must achieve a minimum competency in the following 3 categories. This competency can be achieved by a grade of B or higher in at least one course from each of the following 3

categories or is demonstrated by equivalent knowledge acquired from other sources, such as a similar course completed elsewhere, demonstrated proficiency, or real-world practical experiences. The equivalence must be indicated in the course plan by the student's advisor and approved by the Advisory Committee. The assessment of competency is determined by the student's advisory committee. If the student receives a B- or lower in one of the courses meeting the competency requirement, the advisor may petition the Graduate Studies Committee for approval. Petitions must be received by the following semester. Courses listed below with no prefix are in the Food Science and Technology department, FDSCTE. Courses from FDSCTE must be 5000 level or above, and courses from other fields should be 4000 level or above and taught by a faculty member to receive graduate course credit. Courses below the 4000 level do not receive graduate credit but can add competency.

A. Food Chemistry: 5600, 5610
B. Food Engineering and Processing: 5400, 5410, 5420, 5430, MEATSCI 4510
C. Food Microbiology: 5536, 5546

The student will select a program of courses early in their career in consultation with their advisor. This course plan should use the format found at the end of this handbook (and on the website) and must be approved by the student's Advisory Committee and submitted to the Academic Program Manager **before the end of the first term of enrollment**. The course plan should identify probable dates for proposal, candidacy, and final oral examinations. The advisory committee consists of a minimum of 4 members of the graduate faculty including the advisor. At least one of these committee members, aside from the advisor, must be a full (not adjunct or courtesy) faculty member of the Food Science and Technology department and all committee members must hold Graduate Faculty status at The Ohio State University.

The department does not have additional language or internship requirements for graduate students. Students can pursue internship opportunities with preapproval; see the section on internships.

Doctoral Degree Course Requirements

Students in our doctorate program must complete a minimum of 80 credit hours to graduate. Students entering the PhD program with an MS from another institution can request that 30 credit hours from their MS program be counted toward the 80 credit hours needed for the PhD. This request should be made during the first term of attendance at Ohio State through the Grad Forms application.

Graduate students who wish to transfer to this department from other institutions must complete 24 of their 80 required graduate credits at The Ohio State University over a period of at least two semesters. If credits are being transferred from another institution to count toward a graduate degree, they should be transferred at the time the student is admitted but no later than the end of the first term of enrollment in the Graduate School.

PhD students with a BS in Food Science and no MS degree are required to take at least 26 course credit hours with at least 13 of these course credit hours in FDSCTE. At least 13 of the 26 course credit hours must be at the 6000 level or above, with at least 4 of these 6000 level or

above in FDSCTE.

PhD students with a BS in non-Food Science majors and no MS degree are required to take at least 26 course credit hours with at least 18 of these course credit hours in FDSCTE. At least 13 of the 26 course credits must be at the 6000 level or above, with at least 4 of these 6000 level or above in FDSCTE.

PhD students with a BS and MS with at least one in Food Science are required to take at least 8 course credit hours with at least 4 of these course credit hours in FDSCTE at the 6000 level or above. Students that have already completed FDSCTE 8991 will only be required to take FDSCTE 8992.

PhD students with BS and MS in non-Food Science majors are required to take at least 20 course credit hours with at least 12 of these course credit hours in FDSCTE. At least 10 of the 20 course credit hours must be at the 6000 level or above, with at least 4 of these 6000 level or above in FDSCTE.

FDSCTE 8193 (independent studies) and 8998/8999 (research credits) do not count toward course credits. English as a Second Language courses (any courses in EDUTL) do not count toward graduate credit requirements.

Each student must take FDSCTE 8991 (recommended during their first autumn semester) and FDSCTE 8992 during their final semester (autumn or spring). Students will be presenting their research results during FDSCTE 8992. Students who complete both their MS and PhD degrees at Ohio State are required to take FDSCTE 8992 twice, once during the MS program and once during the PhD program.

B. Proposal Defense

Doctoral students must prepare a research proposal that will be defended before the student's Advisory Committee. The proposal must be received by the committee a minimum of one week before the defense. The proposal should focus on proposed future research and cannot include completed research, except as preliminary results. Preliminary data can be used to support the research plan We recommend using the format of the CFAES Research & Graduate Education Internal Grants Graduate Program as a guideline, but other formats can be acceptable as long as the focus is on future work. The committee will discuss the student's proposed research, provide comments and determine if the student can move forward. It is expected that the exam will occur in person. After the proposal defense, the Academic Program Manager must be notified by the student. The Academic Program Manager will send the Graduate Student Approval of the Research Proposal form and the Graduate Program Assessment and Evaluation Form to the committee to complete electronically. The proposal defense must be completed within two years of the start of the PhD program and before scheduling the Candidacy Examination. Should the committee decide that the student's performance failed to meet expectations, the student is expected to schedule a second defense of the proposal.

C. Candidacy Examination

Students pursuing a PhD degree in Food Science and Technology should complete the Candidacy Examination after completing all required courses in their program of study, but no later than one year before their final defense. The proposal defense must be scheduled and completed before the candidacy examination. The purpose of the Candidacy Examination is to test a student's comprehension of the field of food science and technology, allied areas of study, capacity to undertake independent research, and ability to think and express ideas clearly. Students are encouraged to form study groups to prepare for the examination.

The Candidacy Examination consists of a written and oral portion. The Candidacy Examination will be administered by the Examination committee; which is generally the same as the Advisory Committee. The Candidacy Examination Committee oversees the entire examination, and the composition of the committee should not change between the written and oral portions of the exam. Every Examination Committee member will submit questions and evaluation them. The exam can be closed book (6–8 hrs) or open book (up to 3 days). The student's answers to all questions will be distributed to the Candidacy Examination Committee for evaluation.
If the Examination Committee concludes that the results of the written examination are not satisfactory, the student may waive the oral portion of the Candidacy Examination. The Examination Committee may not deny a student the opportunity to take the oral portion of the Candidacy Examination. If the student waives the oral portion of the Candidacy Examination, a written statement requesting the waiver (II.6.9.7.3) must be presented to the Advisory Committee. In this case, the Examination Committee reports an "Unsatisfactory" on the Report on Candidacy form submitted to the Graduate School, along with a copy of the waiver request from the student.

Oral Portion:

To schedule the oral exam, the student must submit an Application for Candidacy on GRADFORMS and have this approved by their program and advisor at least two weeks before the oral's proposed date. The student must notify the graduate school of the date of the oral portion of the examination, using Grad Forms, a minimum of two weeks before the exam. Once the exam is passed, the student needs to notify the Academic Program Manager, who will send the committee the online Graduate Program Assessment and Evaluation Form to complete. The oral portion of the Candidacy Examination is administered by the Examination Committee and lasts no more than two hours. A student presentation is not a part of the oral portion of the Candidacy Examination. The questions for the oral examination may relate to questions from the written examination but are not limited to those topics. The oral portion of the Candidacy Examination must be completed within one month of completing the written portion of the examination.

The Candidacy Exam tests for a basic understanding of food science and the ability to analyze critically complex problems related to food. Therefore, the student should have a thorough understanding of food chemistry, microbiology, and engineering. At a minimum, the student should have successfully completed core food science courses and should be able to effectively address Candidacy Exam questions relevant to these courses. The Candidacy Exam also tests the student's understanding of a particular specialization within the food science discipline.

Familiarity with theories, research methods, and data analysis and interpretation, within the student's specialization, is essential for passing the Candidacy Exam.

Results of the Candidacy Examination:
The outcome of the Candidacy Examination is reached in the absence of the student. The student is considered to have completed the Candidacy Examination successfully only when the decision of the Candidacy Examination Committee is unanimously affirmative.

If the Candidacy Examination is judged unsatisfactory, the Examination Committee must decide whether the student will be permitted to take a secondary Candidacy Examination and must record that decision on the Report on Candidacy Examination.

If the results of the Candidacy Examination are unsatisfactory and the Examination Committee permits the student to take a second examination, the Examination Committee will provide feedback to the student on ways to improve performance (e.g., recommend areas for study, courses to take). The second exam can include both a new written and an oral portion, or only a new oral exam, as determined by the Examination Committee. The advisor should indicate on the Report on Candidacy Examination from the first attempt that a new written exam will not be required for the second attempt. If any portion of the first written exam was not satisfactory, the Examination Committee must administer a second written exam. A second oral exam will always be required. The Candidacy Examination Committee for a second exam must be the same as the committee for the first attempt, unless a substitution is approved by the Graduate School, and must include a Graduate Faculty Representative.

D. Candidacy

The department's requirements for candidacy for the PhD degree are listed in the Graduate School Handbook, including time limits and readmission for candidacy.

E. Dissertation

The student's advisor and Dissertation Advisory Committee must approve the subject of the dissertation research.

Other departmental rules governing the dissertation, including committee selection, draft approval, format, and approval and submission of the final copy are outlined in the Graduate School Handbook.

F. Final Oral Examination

During the term the student expects to graduate, they need to submit an electronic Application to Graduate to the Graduate School no later than the third Friday of that term. For the application to be approved by the Graduate Studies Committee, students will need to update the copy of their approved Course Plan form with their advisor's signature indicating that the course plan was completed and turn it in to the Academic Program Manager.

The student must submit a copy of their dissertation to their committee, either electronically or printed, a minimum of 3 weeks before their defense. Additionally, the dissertation must be given to the committee a minimum of 1 week before the committee is asked to electronically sign the Application for Final Examination form.

The final oral examination begins with a research presentation. The research presentation should be announced at least 7 days in advance and will be open to the public. Students must send announcement details (title, advisor, date, and location for the seminar) to the Academic Program Manager 7 days prior to the defense. The presentation lasts a maximum of 45 minutes and includes a 20–35 minute presentation followed by a maximum of 10 minutes of questions. The exam continues with a closed-door examination by the student's committee, lasting 60–90 minutes. The start of the presentation to the end of the examination is two hours. The committee, including the graduate school representative, is required to attend the entire exam, which includes the presentation. The closed-door portion of the exam tests the student on originality, independence of thought, and ability to synthesize and interpret information. This examination is based on, but not limited to, the student's dissertation.

If a student's research project is funded by a company and governed by an industry-sponsored research agreement with the university that contains confidentiality language, the advisor will submit a request to the company for the student to publicly present their results at the time the Application to Graduate form is submitted. If the company denies the request, the advisor will inform the GSC and the student will have a confidential, closed exit seminar with only the committee present.

Other rules about the Final Oral Examination, including the selection of the Examination Committee, action by the Graduate School Representative, postponement, and the decision concerning the student's performance and repetition of the examination, are stated in the Graduate School Handbook.

XII. GRADUATE ASSOCIATES

A. Graduate Associate (GA) Responsibilities

Graduate Associates in the department have both teaching and research responsibilities. The GA (GRA or GTA) assists in teaching by helping with preparation for courses, grading, and conducting laboratory experiments. Students on GRA appointments (funded by the department or advisor) are required to provide partial teaching support one term per year. This requirement allows students an opportunity to work on their teaching skills under the direct supervision of a faculty member. Fellows, self-funded students, and externally funded students are not eligible to participate. The level of responsibility given to the GA depends on their level of experience.

The GRA assists in research by performing work as assigned by the faculty member in charge of the project. This faculty member also usually serves as the student's advisor. The total commitment is 20 hours per week, 52 weeks a year, excluding federal holidays. If a student is providing teaching support during a given semester, their teaching commitment applies to the maximum total of 20 hours. The research performed may or may not be part of the student's

thesis.

In addition to their research and teaching responsibilities, GAs are expected to take classes toward their degree. See the section on course requirements for more details.

B. Eligibility Requirements

A student must be a full-time FST student (registered for 18 credit hours in the spring/autumn semesters or 15 credit hours in summer) to be eligible to be a GA. Students are only paid as a GA if they are registered for the full number of credit hours required by the department.
In general, to be eligible for a GA appointment, a student must pursue a graduate degree in an FST departmental program. Students pursuing a graduate degree in other Ohio State departmental programs may be considered when positions cannot be filled from within the department due to a lack of students or specific expertise among the students.

If a student's GPA falls below 3.0, any department associateship will end immediately, including the tuition payment.

Graduate students who are admitted conditionally are not eligible for GA appointments until they achieve regular status. Any exceptions require a petition to the Graduate School.

Other rules of GA appointment eligibility are listed in the Graduate School Handbook.

C. Terms of Appointment

Most GA appointments are for three terms (autumn, spring, and summer). Appointments for less than a year or less than .5 FTE are not allowed except by petition to the Graduate Studies Committee and Graduate School. Offers of appointment and reappointment are made in writing at the beginning of every autumn semester, or as early as possible before the start of the appointment. The offer shall include a statement of the general responsibilities associated with the appointment.

D. Stipends

Stipends for new and renewed GAs in the department are determined according to the university's annually established levels. Instruction and general fees and non-resident fees, when applicable, are authorized by the department or university for all GAs on at least a .5 FTE appointment for the duration of the appointment.

E. Other Forms of Financial Support, Including Outside Jobs

All graduate students on or above a 0.5 FTE paid appointment (GRA, GTA, or Fellowship) may not have any other employment. Exceptions are by advisor petition to the Graduate Studies Committee. Exceptions for Fellows also require Graduate School approval. International students should check with the Office of International Affairs to determine their eligibility.

Fellowships for qualified applicants are available from the College of Food, Agricultural, and Environmental Sciences and the Ohio State Graduate School. Occasionally, the department needs for graduate students to perform part-time service anywhere from one week to a few months. Students who are not appointed as GAs are offered the opportunity to fill this need at an hourly pay rate; however, these assignments do not provide fee authorizations.

F. Criteria for Reappointment or Termination of GA

The department's criteria for reappointment or termination of GAs are listed in the Graduate School Handbook.

G. Grievance Procedures

Grievance procedures are handled as stated in the Graduate School Handbook.

H. Benefits

Benefits for GAs in the department are listed in the Graduate School Handbook. Specifically, concerning Time Off, GAs who have been assigned to assist with laboratory classes are expected to report to the Instructor in charge one week before the beginning of the semester.

GAs who are appointed to research assignments are expected to work during the semester breaks. Such GAs are entitled to 10 working days of Time Off following one full year of service. Time Off cannot be accrued.

XIII. DESK ASSIGNMENTS

The Graduate Studies Committee assigns students to desks in the common areas of 220, 230, 240, 266, 320, 330, 340 Parker and 048, 059D, 144A Howlett. While priority will be given to professors proximate to the lab, assignments will be made based on need and availability.

XIV. OUTSTANDING TEACHING ASSISTANT AWARD

Objectives:

- To motivate and encourage graduate students to contribute to our excellent teaching program for our undergraduate students.
- To provide graduate students the teaching opportunity experience and the advantages of award recognition for obtaining academic faculty positions after their graduate study.

Selection Criteria:

Graduate students assisting with laboratory instruction should be nominated and evaluated by students for the award. There will be one category of recognition: the Departmental Teaching Award with an individual plaque, name on the Departmental Award Display Plaque, and a cash award of $500. The Departmental Teaching Award will be given to the top student each year

with at least 80% of the students rating them in the top 25% and 70% of the students voting "yes" to the candidate who deserves the award. The percentage calculation will be made based on the number of students present in the classroom when the ballot voting occurs.

Evaluation Sheet:

(1) Ranks among TAs at the university:
Top 5%, Top 25%, Top 50%, Below 50%

(2) Should the nominee receive the award? Yes or No
A student can receive a maximum of two teaching awards during their entire graduate study.

The Academic Program Manager will solicit nominations for the award in the 10th week of the semester. The Department Chair and Chair of the Awards Committee will present the award to the winner at the Spring Graduation Party.

Evaluation:

The student evaluation will be administrated and tabulated by a staff member. The staff member should keep records until the end of the following semester.

XV. OUTSTANDING RESEARCH AWARD

Objective:

To motivate and encourage graduate students to publish research in top-tier food science (or related) journals or patent research inventions in a timely manner.

Award Criteria:

All the graduate students who meet the award criteria will be presented with the award.

MS student: One or more journal research publications (and/or patent) with cumulative score of 2 and above.
Cumulative score = (publication 1)*(CF1) + (publication 2)*(CF2) $\geq$ 2

PhD student: Three or more journal research publications (and or patents) with cumulative score of 5 and above
Cumulative score = (publication 1)*(CF1) + (publication 2)*(CF2) + (publication 3)*(CF3) $\geq$ 5

Calculation of Cumulative Score:

The impact factor of an academic journal is an index calculated by Clarivate that reflects the yearly mean number of citations of articles published in the last two years in a given journal.

Refer to Clarivate Journal Citation Reports for impact factors (IF) for various food science and technology journals. Use the impact factor for the year you are applying the award to determine the calculation factor (CF):

IF 0–3: CF = 1;
IF 3-6: CF = 2;
IF 6-12: CF = 3;
IF > 12: CF = 4

Provisional patent: CF = 2; Utility patent: CF = 3

Additional Considerations:

Original peer-reviewed journal articles or provisional or utility patents must be based on thesis or dissertation research. For multi-author publications or patents, document your significant research contributions; please include full citations for each publication. The Food Science and Technology Awards Committee will decide the appropriateness of the work if there are any uncertainties or questions.

Award Selection:

Submit supporting material for the award (electronic copies of the publication, patent) to the Chair of Food Science and Technology Awards Committee. M.S. students apply for the award within 2 1/2 years after starting the MS program. Doctoral students should apply within 5 years after starting the PhD program.

Awards:

1. Individual Plaque and $500 Cash Award
2. Departmental Award Display Plaque

XVI. OTHER COMPETITIONS, AWARDS, AND RECOGNITION

As a part of our graduate student program, students will have many opportunities to participate in competitions and be recognized for their excellence. Some of those opportunities, which are open to all our students, are highlighted below. While the exact dates will change each calendar year (and can be checked using the links provided), the general timeline will remain the same.

Hayes Forum

The Edward F. Hayes Graduate Research Forum is co-sponsored by the Council of Graduate Students, the Graduate School, and the Office of Research. The competition takes place each year during the spring semester. The benefits of participating in this competition are as follows:

- Encourages graduate students to share their research with the academic community
- Recognizes outstanding graduate student research at Ohio State
- Facilitates exchange between students, faculty, administration, and the public
- Provides a significant professional development experience for graduate students

CFAES poster competition

This poster competition takes place in conjunction with the annual Celebration of Research Week, usually held in April.

CFAES Research and Graduate Education Internal Grants Program Competition

The Graduate Student IGP Awards are intended to accomplish the following objectives:

- Provide graduate students with an opportunity to gain experience with research methods in food, agriculture, environmental sciences, human ecology and related social sciences
- Introduce graduate students to the grant-writing and peer-review processes
- Stimulate faculty-graduate student collaborations and mentoring of graduate students by CFAES faculty

The application can be found here, and is typically due in December. Acceptable expenses for the grant include materials and supplies, domestic travel, publication costs, rental fees, and other expenses.

IFT

IFT Student Association Competitions provide student members of IFT the unique opportunity to compete individually or in teams. Competition details are found on the IFTSA website.

IFT COMPETITIONS & AWARDS

College Bowl
IFTSA Developing Solutions for Developing Countries Product Development Competition
IFTSA and Mars Product Development Competition
Smart Snacks for Kids Product Development Competition
Excellence in Leadership Award
Undergraduate Research Competition
Graduate Research Video Competition
Chapter of the Year
InFoodrafic: A Global Infographic Competition
Proteins of the Future Challenge
American Egg Board Eggcelerator Lab Product Development Competition

IFT Graduate Research Paper Competition

IFT, in coordination with Phi Tau Sigma, hosts an annual Graduate Research Paper Competition. Students entering the competition must be IFT members by the date of submission. Please see the IFT website (www.ift.org) for details.

OVIFT poster competition

The Ohio Valley section of the IFT sponsors a student poster competition, typically held in March or April together with the OVIFT Symposium or the OVIFT Suppliers Expo. In 2024, it will be in the autumn. The submission of a poster abstract has traditionally been due about 10 days before the event. Information about opportunities for students through OVIFT can be found at the OVIFT website.

Russell Klein OSUN poster and oral competition

This competition takes place during the spring. Information about entering the competition is announced at the beginning of the spring semester in the blog posts of the Council of Graduate Students which can be found at http://cgs.osu.edu/blog/.

REQUIRED TRAINING

All graduate students are required to complete safety training. There are 2 required courses:

1. Laboratory Standard Training
2. Building Emergency Action Plan, OSU-BEAP

The two courses listed above are offered every fall during the new graduate student orientation in the Parker Food Science Building. They can also be taken online at the Environmental Health and Safety web page**.** Once completed, you need to give the Academic Program Manager and your lab safety manager a copy of the certificates indicating you have passed.

To take these courses online follow the instructions below:

1) Click on the link to the Environmental Health & Safety webpage: http://www.ehs.osu.edu
2) Click on the word **"Training"** in the gray bar to open the **"EHS Online Training"** page.
3) Click on the appropriate training category for each course.
   - Laboratory Standard Training is listed under **"Research/Biosafety Training."**
   - OSU-BEAP is listed under **"Occupational Health and Safety Training"**
4) Locate the training course and click the "Take This Course" button.
5) Sing in using your osu.edu email address.
6) Follow the course instructions to complete the training.
7) Repeat the above steps for the remaining course(s).

Depending on the work performed in your laboratory, you may be required to go through additional safety training.

Note: All OSU employees (except employees working in a laboratory setting) are required to take the "Hazard Communication" course. If you complete Lab Standard Training, you do not need to complete Hazard Communication.

MS Thesis Course Plan to be completed the first term of enrollment and filed with the Academic Program Manager for (Student's Name): ______________________________ Date: __________

Committee Members: ______________________________ _________________________ (Advisor)
(type and sign) ______________________________ _________________________
______________________________ _________________________

I. List the courses to be taken each term, including research credit hours. Each term the credits should add up to 18 (for autumn and spring), or 15 credits for summer term. Include expected graduation.

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Total # of FDSCTE course credits (at least 12): _______ Total # of course credits (at least 20): _______
Total # of 6000+ level course credits (at least 6):_____ Total # of credits for degree (at least 30): _____

Write below what FST courses or equivalents fulfill the 3 competency requirements. A grade of B or higher is required to fulfill a competency requirement. A grade of B- does not fulfill the requirement.

Competency	food chemistry	Engineering and processing	food microbiology
Course/Equiv.			

II. During the term you expect to graduate, you will need to electronically submit an Application to Graduate form in GRADFORMS. For your application to be approved by the GSC, you must submit an updated copy of this course plan with your advisor's signature to the Academic Program Manager.

The student has completed their coursework as approved by the advisory committee.

______________________________ (Faculty Advisor) ______________ date

The Ohio State University

MS Non-Thesis Course Plan to be completed the first term of enrollment and filed with the Academic Program Coordinator for (Student's Name): ______________________ Date: ________

Committee Members: ________________________ ________________________ (Advisor)
(type and sign) ________________________ ________________________
________________________ ________________________

III. List the courses to be taken each term, as well as research credit hours. Each semester the credits should add up to 18 (for full-time status), or 15 credits for summer term. Include expected graduation.

Term:	cr	grade	Term:	cr	grade
TOTAL			TOTAL		

Term:	cr	grade	Term:	cr	grade
TOTAL			TOTAL		

Term:	cr	grade	Term:	cr	grade
TOTAL			TOTAL		

Term:	cr	grade	Term:	cr	grade
TOTAL			TOTAL		

Term:	cr	grade	Term:	cr	grade
TOTAL			TOTAL		

Term:	cr	grade	Term:	cr	grade
TOTAL			TOTAL		

Total # of FDSCTE course credits (at least 14): ______ Total # of course credits (at least 26): _______
Total # of 6000+ level course credits (at least 6): _____ Total # of credits for degree (at least 30): _____

Write below what FST courses or equivalents fulfill the 5 competency requirements. A grade of B or

higher is required to fulfill a competency requirement.

Competency	food chemistry	engineering or processing	food microbiology	nutrition and biochemistry	integrated
Course/Equiv.					

IV. During the term you expect to graduate, you will need to electronically submit an Application to Graduate form in Grad Forms. For your application to be approved by the GSC, you must submit an updated copy of this course plan with your advisor's signature to the Academic Program Coordinator.

The student has completed their coursework as approved by the advisory committee.

_____ _____

(Faculty Advisor) date

PhD Course Plan to be completed the first term of enrollment and filed with the Academic Program Coordinator for (Student's Name): _____ Date: _____

Expected Area of Research: _____
By signing below, the Advisory Committee approves the student's proposed course work:

Committee Members: _____ _____ (Advisor)

(type and sign) _____ _____

_____ _____

_____ _____

_____ _____

Minimum Course Requirements: Highlight the line that applies to you.

If you have a:	# of course credits at OSU	# of course credits in FDSCTE	# of 6000+ level course credits
BS in Food Science; No MS	26	13	13
BS in non-Food Science, No MS	26	18	13
BS and MS (at least one in Food Science)	8	4	4
BS and MS in non-Food Science	20	12	10

I. Write below what FST courses or equivalents fulfill the 3 competency requirements. A grade of B or higher is required to fulfill a competency requirement.

Competency	food chemistry	engineering/ processing	food microbiology
Course/Equiv.			

II. List courses and research credits planned per term. Include expected terms for proposal defense (must complete by the 2nd year and before the candidacy exam), candidacy exam (after courses are completed but at least one year before graduation), and graduation. Before candidacy, total credits should be 18/semester or 15/summer (for full-time status). After candidacy, total credits should be 3.

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade
TOTAL		

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Term:	cr	grade

TOTAL

Total course credits in FDSCTE: ______
Total course credits of 6000+ level: ______
Total course credits (refer to Section XI.A. of the FST Graduate Student Handbook): _____
Total credits for degree (at least 80): ______
Semester and year for proposal defense: _____
Semester and year for candidacy exam: ______
Semester and year for final exam: ______

III. The term you expect to graduate you will need to electronically submit an Application to Graduate form in Grad Forms. For your application to be approved by the GSC, you must submit an updated copy of this course plan with your advisor's signature below to the Academic Program Coordinator.

The student has completed their coursework as approved by the advisory committee

________________________________ ______________
(Major advisor) date

Graduate Student Research Award
Application Form

Date: _____

Student Name: _____

Advisor: _____ Advisor signature: _____

Thesis or Dissertation Title: _____

Starting Date for Graduate Program (Transcript Record)

MS: _____ Ph.D: _____

Attach a list of your publications (authors, year, title, source, pages) as well as a copy of the published paper, galley proofs, or an acceptance notification.

Selection Criteria: (Publications from MS work do not count toward PhD criteria)

MS candidate:

2 1/2 years after starting the MS program—2 accepted publications:

PhD candidate with MS degree:

4 years after starting the PhD program—4 accepted publications.

PhD candidate without MS degree:

5 years after starting the PhD program—4 accepted publications.

To be submitted to Chair, Research Award Committee

MS to PhD Transfer Form

According to the FST Graduate Program Handbook, transfer from the MS program without completing the MS may occur no later than the end of the first two weeks of the 5th semester with the support of the student's advisory committee and approval of the Graduate Studies Committee. The form must come from the student's advisor, outline the student's academic and research excellence, and be signed by the student and the advisory committee members. Strong candidates for transfer to the PhD program will have a 3.5 GPA or higher and demonstrated research experience.

Justification for Transfer:

Student's Cumulative GPA: _____

Signatures:

Student Name	Signature	date
Advisor Name	Signature	date
Committee Member Name	Signature	date
Committee Member Name	Signature	date

Please give a copy of this form to the Academic Program Manager.

Graduate Studies Chair Name	Signature	date

Graduate Student Approval of the Research Proposal Form

According to the FST Graduate Program Handbook, all PhD candidates are required to prepare and defend, within 2 years of starting their Ph.D. program, a research proposal before their Advisory Committee. This must be done prior to the Candidacy Examination.

This form certifies that (Ph.D. candidate's name) _____

has satisfactorily completed the Proposal Defense on _____
date

Proposal Title: _____

Advisory Committee:

_____
Signature – ADVISOR date

_____
Signature date

_____
Signature date

_____
Signature date

Please give a copy of this form to your advisor and to the Academic Program Manager.

Graduate Student Petition for Change of Advisor Form

Students may submit a change of advisor petition for consideration to the Graduate Studies Committee. If approved, an advisor change will occur at the end/beginning of a term. This form must be turned in to the graduate program at least one week before the change becomes effective. The student should be aware that changing advisors may affect funding and their graduation timeline. If the student has chosen to change advisors after the first semester in the program, the Graduate Studies Chair may determine that a meeting is needed to discuss the change ensure that both the former and new advisors agree. The student is responsible for securing the signature of the new advisor and turning the petition into the Academic Program Manager.

This form certifies that (student's name) _____

currently advised by (current advisor) _____

will be advised by (new advisor) _____

effective (term / year) _____

_____

Student's Signature Date

_____

Current Advisor's Signature Date

_____

New Advisor's Signature Date

_____

Graduate Studies Chair's Signature Date

Please give a copy of this form to the Academic Program Manager.

DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

Graduate Program Assessment and Evaluation Form

Student Name: **Program (Circle):** **MS** **PhD**

Evaluator: **Date:**

Type of Evaluation / Assessment Tool (check applicable program component)

❒ **Proposal Defense:** Written research proposal and oral presentation	❒ **Candidacy Exam:** Written exam and oral exams	❒ **Thesis / Dissertation:** Written document and oral presentation

For each attribute/outcome please select a rating (please place a checkmark in the desired rating cell).

Learning Outcome	Exceeds Expectations	Meets Expectations	Meets Some Expectations	Does Not Meet Expectations	N/A
Understands the basic principles of chemistry					
Understands the basic principles of microbiology					
Understands basic principles of processing and engineering					
Comprehends and appropriately uses statistics					
1.1 Understands core competencies of food chemistry, microbiology, and processing and engineering and integrates knowledge					
1.2 Analyzes and applies information in core competencies					
2.1 Prepares an in-depth review of the literature related to the research problem					
2.2 Utilizes appropriate literature and applies information to research and findings					
3.1 Presents high quality proposed work or research findings					
3.2 Defends proposed work or research findings					
4.1 Shows effective written communication skills in document					
4.2 Exhibits effective oral presentation skills					
Totals (Tally each column)					

Overall rating: Select your overall rating of the student's performance on this evaluation.	❒ Exceeds Expectations	❒ Meets Expectations	❒ Meets Some Expectations	❒ Does Not Meet Expectations
Sign and provide comments (optional) on the strengths and weaknesses of the student or the program.	Final Comments:			

_____ Signature of Evaluator	

DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

Graduate Program Assessment and Evaluation Form

Instructions

This Food Science and Technology Graduate Program Learning Outcome Assessment Tool is used to monitor the performance of our Graduate Program, as reflected by the performance of our graduate students on major landmark steps in their pursuit of a graduate degree in Food Science and Technology.

Students are responsible for notifying the Academic Program Manager as soon as they pass any of the following steps in their pursuit of a graduate degree:

MS Students

- Exit seminar and thesis (Plan A students) or project defense (Plan B students)

PhD Students

- Proposal Defense
- Oral Candidacy Exam
- Exit seminar and dissertation defense

Each thesis or dissertation committee member fills out the electronic form, according to the following criteria (or ratings)

Explanation of Ratings

Exceeds Expectations:
Student goes above and beyond normal expectations (for example concepts clearly stated and understood).

Meets Expectations:
Student meets the requirements (example: generally organized and understands concepts).

Meets Some Expectations:
The student meets some of the requirements but has a limited understanding of some areas. Student needs to work on an aspect of their project (example: concept and ideas are not connected).

Does Not Meet Expectations:
The student has no understanding of area (example: does not analyze data properly).

N/A: Not applicable, did not have the opportunity to asses.

Department of Food Science and Technology

Graduation Checklist: This is a typical graduation plan. See the FST Graduate Student Handbook and Graduate School Handbook for complete details.

☐ Form and meet with the Advisory Committee to approve the course plan before the end of the first term. Submit a copy of the signed course plan form to the Academic Program Manager.

☐ Meet with the Advisory Committee occasionally to discuss research progress.

☐ If on a GA, fellowship, or another stipend, register for 18 credits per autumn or spring semester and 15 in summer.

☐ Take both seminar classes (FDSCTE 8991 and 8992).

☐ For PhD, pass your Proposal Defense before the end of the second year and before scheduling your candidacy exam. Give your proposal (focused on future work) to the committee one week before the exam. Notify the Academic Program Manager to send the Approval of the Research Proposal form and Graduate Program Assessment and Evaluation Form.

☐ For PhD, complete the candidacy exam.
- Form your Examination Committee, usually the same as your Advisory Committee.
- Normally all classes in your course plan except FDSCTE 8992 should be completed before taking the candidacy exam.
- Take the written examination, coordinated by your advisor, no more than one month before the oral exam.
- Submit date for the oral portion of the candidacy exam to the graduate school at least two weeks before the exam: GRADFORMS
- After passing the exam, make sure that all committee members have electronically signed the Report on Candidacy Form and submitted the Graduate Program Assessment and Evaluation Forms to the Academic Program Manager.

☐ Complete program credit requirements as outlined in the FST Graduate Handbook with a GPA higher than 3.0.

☐ Submit research results for publication.

☐ Submit an electronic Application to Graduate Form (Graduate School Graduation Forms) to the Graduate School at the start of the term you intend to graduate (no later than the third Friday of that term). For the application to be approved by the GSC, you will need to update your approved course plan and obtain your advisor's signature indicating that you completed your course plan. This form must be submitted to the Academic Program Manager before the application deadline. If you are unable to graduate that term, notify the Graduate School promptly.

☐ Submit thesis or dissertation to your research committee at least 1 week (MS) or 3 weeks (PhD) before the date of the final oral exam. For PhD, this gives the committee 1 week to read it before they sign the Application for Final Examination Form (Graduate School Graduation Forms).
- Have the thesis or dissertation checked by the Graduate School for formatting, according to the rules in the Graduate School Handbook.

☐ For PhD, electronically submit the Application for Final Examination Form at least two weeks before the final oral exam. Make sure that all committee members have electronically signed the form before the deadline. Submit a printed version of the completed form to the Academic Program Manager.

☐ Email Academic Program Manager with title, name of advisor, date, time, and location of defense at least 7 days before the defense.

☐ Pass the final oral exam and make sure all committee members have electronically signed the Report of Final Examination form by the deadline (about 10 days before the last day of class, depending on the term). Make sure that all committee members submitted the signed Graduate Program Assessment and Evaluation Forms to the Academic Program Manager.

☐ Verify that all committee members have electronically signed the Report on Final Document form by the deadline (near the last day of class, depending on the term).

☐ Submit the thesis or dissertation electronically. Instructions at Graduate School Final Semester Checklist.

☐ GRAs end on the dates set by the Graduate School, generally mid-May, mid-August, and the end of December. Get approval before accepting work before that date. If you will continue to work at OSU after graduation and you are not registered as a student, you must be appointed to an hourly or salaried appointment. International students must resolve I-20 and practical training issues.