

TEXAS WOMAN'S UNIVERSITY
HANDBOOK FOR DOCTORAL STUDENTS IN
THE DEPARTMENT OF NUTRITION AND FOOD SCIENCES

This handbook has been compiled to assist doctoral students in the Department of Nutrition and Food Sciences (NFS). The purpose of the handbook is to acquaint students with departmental standard operating procedures. As with all components within the university, all procedures must comply with the policies and procedures set forth by Texas Woman's University. The information contained in this handbook is to supplement but not replace the [Graduate Catalog](#). For general requirements and regulations for a doctoral degree, refer to [Graduate School](#) and [Department of Nutrition and Food Sciences](#) in the Graduate Catalog and [online](#).

SEQUENCE FOR ADMISSION TO CANDIDACY

Admission to Graduate School does not imply admission to candidacy for a doctoral degree. The following is the sequence that a doctoral student must follow to gain acceptance to candidacy for the doctoral program in Nutrition and Food Sciences. Details for each step are given below.

1. Admission to program ([Graduate School](#))
2. Formation of an academic advisory committee
3. Unconditional Graduate School admission status
4. Completion of core requirements including research tools
5. Submission of degree plan (before completion of 18 semester hours)
6. Successful completion of qualifying exam (all sections)
7. Admission to candidacy

SEQUENCE FOR SUCCESSFUL RESEARCH ENDEAVOR

1. Rotation in research labs or participation in research projects during the first two to three semesters at TWU
2. It is recommended that the student select a focus for his/her dissertation research during the first year at TWU. The director of the research project(s) will serve as the student's major professor.

ACADEMIC ADVISING

Admission Status

Students may be accepted to the Graduate School as Unconditional or Provisional. When the admission status is Provisional, conditions stated on the letter of admission must be completed prior to submission of a degree plan. When the conditions have been met, the student should contact the major professor to submit a request to the Graduate School to change admission status to Unconditional. Failure to meet the conditions of the conditions of admission may result in the removal of the student from a degree program. See the [Graduate Catalog](#) for additional information.

Role of the Academic Advisory Committee

All members of the academic advisory committee must have a terminal doctoral degree and be members of the TWU Graduate Faculty. The functions of the academic advisory committee are to review the degree plan of the student and administer the oral portion of the qualifying exam. The sequence for the advisory committee is as follows:

1. Semester 1: The admissions committee assigns an academic advisor when the student is

accepted to the program. This faculty will guide the course registration for the first semester of the student's academic career.

2. Semester 2: The student should select a major professor to guide the rest of the doctoral program. In addition, the student will form an academic advisory committee to guide subsequent course selections. The committee shall be as follows:
 - a. The student and major professor will discuss faculty as possible members.
 - b. The final committee will consist of at least five members of the Graduate Faculty.
 - c. At least three of the members of the committee must be NFS faculty.
 - d. The committee may include one or two members from outside NFS, which could include faculty from the minor area.
 - e. If a potential member of the committee is from an outside university or entity, a letter to the graduate Dean along with a CV of this individual must be submitted and approved before the degree plan is approved.

A student has the option to change advisors. This should be done as early as possible during the course of study. The student must complete a Change of Advisor form (see NFS department office) for changing advisor and secure appropriate signatures before submitting to the Chair of the department.

DEGREE PLAN

Role of the Academic Advisory Committee

A degree plan must be submitted to the Graduate School before completion of 18 semester hours at TWU. The student, in consultation with the major professor, shall prepare a [degree plan](#) and present it to the academic advisory committee for approval. The degree plan will then be submitted to the NFS Chair for review. The student is responsible for scheduling the time and place of the meeting as well as submitting the approved degree plan with the signatures of the committee members to the NFS Chair for approval. The completed form will be sent to the Graduate School with the approval of the NFS Chair. The committee members' initials on the degree plan constitute the membership of the student's committee.

Change in Degree Plan

Once the degree plan has been approved by the Dean of the Graduate School, any changes should be made after consultation with the academic advisory committee and the Chair of the student's committee. The completed [Change in Degree Plan](#) form will be sent to the Graduate School with the approval of the NFS Chair.

Research Tools

A doctoral student must complete two research tools. Each research tool must have a minimum of six credit hours. One of the research tools must be six hours of graduate level statistics. The other six hours of research tools will be selected from approved courses as determined appropriate by the academic advisory committee.

SUMMARY OF REQUIREMENTS FOR PHD IN NUTRITION DEGREE

Requirements	Courses
Core courses in nutrition (11 credits)	NFS 5314 Nutrition and Human Metabolism, NFS 6123 Micronutrients, NFS 6124 Macronutrients
Research tools (minimum 12 credits)	6 credit hours of statistics and additional 6 or more credit hours or other courses recommended by the advisory committee
Nutrition electives (6 credits)	6 credit hours or more of graduate courses in nutrition
Outside NFS department electives (no minor or emphasis) (9 credits)	9 credit hours of graduate courses in the department of Biology and/or department of Chemistry and Biochemistry. These courses will be decided in consultation with the advisory committee.
Minor or Emphasis in Food Science (9 credits)	9 credit hours of graduate courses in the department of Biology and/or department of Chemistry and Biochemistry. These courses will be decided in consultation with the advisory committee.
Minor or Emphasis in Food Systems Administration (9 credits)	9 credit hours of graduate courses in health care administration and/or School of Management. These courses will be decided in consultation with the advisory committee.
NFS 5331 or NFS 6331 Seminar in Nutrition (4 credits)	4 semesters minimum (1 credit hr x 4 = 4 credit hours)
NFS 6921, NFS 6923, NFS 6931, NFS 6933, NFS 6941, NFS 6943	As needed
PhD dissertation (6 credits)	6 credit hours

Total minimum credit hours needed for PhD in Nutrition is 90 credit hrs.

PHD PRELIMINARY EXAMINATION GUIDELINES

Application

Responsibilities of the PhD Preliminary Examination Committee

The NFS PhD Preliminary Examination Committee of four members will be responsible for:

1. An email and notification of the NFS website to inform students that during the month before the end of the fall and spring semesters, eligible doctoral students should submit an application to take the PhD preliminary examination and potential written preliminary examination proposal topics.
2. Approving one of the topics for a written proposal.
3. Grading the written proposal. The committee will meet and discuss the topics and provide a written response to the student within 10 working days of receipt of the request.

Eligibility for the Preliminary Examination

Students will be eligible to take the preliminary examination after completion of the NFS core courses (11 credit hours including NFS 5314 Nutrition and Human Metabolism, NFS 6123 Micronutrients, and NFS 6124 Macronutrients) and research tools (12 credit hours including 6 credit hr statistics and 6 credit hr other tools such as foreign language, computer applications, research design, grant writing, laboratory techniques, or electronic information resources.) An email and notification on the NFS website will inform students that during the month before the end of the fall and spring semesters, eligible students should submit an application to take the PhD preliminary examination. The application should include three research proposal topics selected in consultation with their major professor. The examination will be offered twice a year September/October and February/March so that students may complete both the written and oral portions of the examination before the end of each semester. The student is responsible for scheduling the oral examination within 20 working days from the day the written examination is submitted.

Parts of the Preliminary Examination

The PhD preliminary examination is a test of the ability of a doctoral student to apply his/her knowledge, experience, creativity, and independent, critical thinking prior to his/her admission to candidacy in the Nutrition and Food Sciences department. The examination will consist of two parts:

1. A written research proposal in the general area of the student's research.
2. An oral examination over the content of the written proposal plus questions relating to core courses and the student's area of speculation.

Part 1. Written research proposal: The student will choose and submit three original research proposal topics with the approval of the major professor. The topics should be related to the area of research the student is interested or contemplating for his/her dissertation. The topics should be written as research questions using the PICO format: Population, Intervention, Comparison, and desired Outcome.

Definitions:

Population: Patient or problem.

Intervention: The act of intervening, interfering, or interceding with the intent of modifying the outcome. Cause, treatment, or prognostic factor.

Comparison: An examination of two or more items to establish similarities and dissimilarities.

Outcomes: Something that follows as a result or consequence of the treatment or intervention.

Example of a good PICO research question: *What are the mechanisms and factors (problem) that affect triacylglycerol response (outcome) to high carbohydrate diets (intervention) in healthy and overweight individuals (comparison and population)?*

The student will apply, in writing, to the Chair of the NFS PhD Preliminary Examination Committee to take the examination, and the committee will approve one of the topics based on relevance and originality for the written research proposal. The student will receive written approval of his/her application from the Chair of the committee within 10 working days. The originality of the proposal topic will be checked by the committee based on a search of PubMed or Clinical Trials prior to approval of the topic. Once the proposal topic is approved, the student will have 10 working days to write a written research proposal of ~10 pages not counting references. The proposal may be designed for in vitro, animal studies, food science/food chemistry, or human studies important in the role of nutrition in human health or disease.

Proposal Guidelines: The proposal should be double spaced, not less than 11 pt. font, with margins not less than 1 inch, using AMA or APA referencing style. The proposal will include (approximate page length and weighting of each section in percentages): Introduction (10%, 1 page), Rationale and Significance (25%, 3-4 pages), Purpose and Hypothesis (5%, half to 1 page), Methodology and Statistical Analyses (20%, 2 pages), Expected Outcomes (5%, half to 1 page), Time Frame (5%, half to 1 page), plus References (10%). The proposal will also be evaluated on organization and language (10%) and sentence structure and grammar (10%). These are suggested lengths and may be modified.

Proposal Evaluation Criteria: The written proposal will be evaluated by the PhD Preliminary Examination Committee using the grading rubric. The proposal will be developed independently on the student's time frame during 10 working days. Prior to submission, the student is advised to upload the proposal to Blackboard Turnitin and self-evaluate for any potential plagiarism. The committee will use the Turnitin program to evaluate all proposals for plagiarism and the grading rubric to determine the quality of the written proposal.

Part 2. Oral Examination: After the written proposal has been graded with a passing score, the student will be eligible to schedule the oral examination. The oral examination will be conducted by the student's research committee with the major professor acting as Chair. The oral examination will cover the written proposal plus additional questions related to the core courses and the student's area of specialization.

Examination Time Frame

The student will be given 10 working days to complete the written proposal from the time he/she receives written approval by the NFS PhD Preliminary Examination Committee. The written proposal will be graded by the NFS PhD Preliminary Examination Committee, and the results will be provided to the student within 10 working days. Once a passing grade is received on the written proposal, the student is responsible for scheduling the oral examination within 20 working days from the day the written examination is submitted. A student may have up to three hours for the oral examination.

Administering and Grading the Examination

Part 1. Written Proposal: The NFS PhD Preliminary Examination Committee will grade the written proposal. A scoring rubric will be used by the committee to evaluate the quality of the written proposal. A passing score of 80% will be necessary to proceed to the oral defense with the results of the written proposal provided to the student in writing. The student will be given the written examination score (either a pass or a fail) plus feedback on strengths and areas to be improved.

Part 2. Oral Examination: The student's research committee, with the major professor acting as Chair, will be responsible for administering the second part of the preliminary examination. The oral examination will cover the research proposal as well as questions on the core courses and the student's area of specialization. At the end of the oral examination, the student will be asked to leave the room while the committee deliberates and makes a decision. The major professor will inform the student about the committee's decision when the student is readmitted to the room. The student will know that day whether or not he/she has successfully completed the second part of the preliminary examination as determined by a positive vote by the majority of the student's committee. The student will be recommended for admission to candidacy once he/she passes the oral examination. Regardless of the outcome, the student will be given the results of his/her examination, both verbally by the committee after the oral examination and in writing, within 10 working days of the oral examination. The decision of the committee concerning the oral part of the examination will be sent to the Chair of the NFS department who will send a letter to the student concerning his/her performance on the preliminary examination.

Failing Part of the Preliminary Examination

The student is allowed two opportunities to pass each part of the examination. A student who fails the written proposal will not be allowed to progress to the oral defense and must reapply to take the preliminary examination and write another proposal within six months of the first attempt. The student may submit the two topics not previously selected and propose one new topic. If a student fails the second attempt at the written portion, he/she will not be eligible to continue the doctoral program. If the student fails the oral defense, he/she must reschedule the oral examination within six months of the first attempt. If a student fails the second attempt at the oral examination, he/she will not be eligible to continue the doctoral program. During the time a student is waiting to complete a part of the examination after a failure, they may not enroll in NFS 6983 or NFS 6993 Dissertation I and II but may take elective courses or independent study until the qualifying examination is passed. A student will only be recommended for admission to doctoral candidacy after successfully completing both parts of the preliminary examination.

Preliminary Examination Time Line

- The student completes all NFS core courses (11 credit hours, including NFS 5314 Nutrition and Human Metabolism, NFS 6123 Micronutrients, and NFS 6124 Macronutrients) and research tools (12 hours, which includes 6 credit hours statistics and 6 credit hours of other tools such as foreign language, computer applications, research design, grant writing, laboratory techniques, or electronic information resources).
- The student develops three possible topics for written research proposal for the first part for the preliminary examination with advice from major professor.
- The student applies to NFS PhD Preliminary Examination Committee to take preliminary examination, and committee approves/disapproves proposed written research proposal

topic. The student receives written approval of his/her research proposal topic within 10 working days.

- Written proposal will be graded by NFS PhD Preliminary Examination Committee, and results will be provided to the student within 10 working days by the Chair of NFS PhD Preliminary Examination Committee.
- Once a passing grade is received on the written proposal, the student is responsible for scheduling the oral examination within 20 working days from the day the written examination is submitted.
- The student's research committee, with the major professor acting as Chair, is responsible for administering the oral examination. The oral examination will cover the research proposal as well as questions covering the core courses and the student's area of specialization. The student may have up to three hours for the oral defense.
- Decision of the committee concerning the oral examination will be sent to the Chair of the NFS department who will then send a letter to the student concerning his/her performance on both parts of the preliminary examination.
- Once the student has successfully passed both written and oral portions of the preliminary examination, the student is recommended for admission to doctoral candidacy.

Minimum Competency Areas for PhD Qualifying Examination

The minimum competency areas apply to both the written and oral examinations.

PhD in Nutrition with no Emphasis Area

Although it is an option, an emphasis area is not required for PhD in Nutrition. Each student should have basic knowledge and applied knowledge before taking the Preliminary Examination.

Basic Knowledge: A doctoral student should be able to:

1. Recognize basic structures of all essential nutrients including vitamins, carbohydrates, amino acids, and lipids
2. Demonstrate understanding of intermediary metabolism and its regulation of all nutrients (not just be able to repeat the steps from memory);
3. Discuss in detail the practical application of the use of statistics in nutrition research.

Applied Knowledge: A doctoral student should be able to apply basic knowledge of nutrition to a discussion of nutrition through the life cycle, energy metabolism, nutrition in disease states, assessment of human nutritional status, and a thorough understanding of the use and the development of the Dietary Reference Intakes. The student should demonstrate an ability to apply knowledge of statistics and research design as well as current trends and controversies in nutrition.

PhD in Nutrition with Minor or Emphasis in Food Systems Administration

In addition to basic and applied knowledge in nutrition, the doctoral student who focuses on food systems administration should be able to:

1. Discuss methods of menu planning, purchasing, food production, food service and distribution, and marketing
2. Demonstrate skill in management of human and financial resources for foodservice
3. Apply theories of management and leadership to the administration of foodservice

PhD in Nutrition with Minor or Emphasis in Food Science

In addition to basic and applied knowledge in nutrition, the doctoral student who focuses on food science should be able to:

1. Explain the chemistry and composition of basic foods including the major and minor constituents, especially foods containing high amounts of fat, oils, and other lipids
2. Describe the functional properties of foods and food systems based on their composition including their solubility, food dispersion characteristics, and food stability tendencies
3. Explain the physical and chemical properties of food and food ingredients and how this affects their processing and manufacturing
4. Describe both subjective and objective evaluations of foods including sensory and analytical testing of foods
5. Recognize concerns in food safety and sanitation

Course Registration Required for Research and Dissertation

The student should register for NFS 6983 Dissertation during the semester when the prospectus is in preparation. Each semester thereafter, the student should register for NFS 6993 Dissertation and/or research (NFS 6921, NFS 6923, NFS 6931, NFS 6933, NFS 6941, or NFS 6943) with the major professor only. Registration for research (NFS 6921, NFS 6923, NFS 6931, NFS 6933, NFS 6941, or NFS 6943) for each member of the student's advisory committee is required during the semesters the student is writing the prospectus or writing the dissertation and defending his/her dissertation. Registration for dissertation or research hours during summer sessions is not required if the student does not plan to use university facilities or meet with the major professor. University regulations state that only officially registered students may hold conferences with faculty concerning the preparation of a dissertation or work in a laboratory.

RESEARCH REQUIREMENTS

Beginning students should discuss their research interests with each NFS faculty during their first semester at TWU. It is expected that a doctoral student in the Department of Nutrition and Food Sciences will begin working on a research project within one year of beginning course work toward his/her degree. It is required that a doctoral student have submitted and/or published at least two papers in peer-reviewed journal(s) before dissertation defense; the student must be first author of at least one of these articles. Students are encouraged to identify a major professor and begin their research as soon as possible but no later than one year after entering the program. It is the responsibility of the student to identify a major professor.

Research Committee

A research committee should be formed when the student has satisfactorily passed both the written and oral qualifying examinations and has been admitted to candidacy. The members of the research committee usually are faculty members who have expertise in the area of research that the student is pursuing. The major professor and/or members of the academic advisory committee may continue as members of the research committee. A non-TWU faculty may serve as a co-chair of the research committee with the approval of the major professor, NFS Chair, and Dean of the Graduate School.

The major professor has authority over the project and must be a full member of the TWU Graduate Faculty. The research committee evaluates the professional promise, plans for continued study, and progress of the student with respect to the dissertation. The research committee approves the prospectus and the dissertation as well as certifies the completion of the final examination.

The graduate student, in consultation with the major professor, is responsible for forming the research committee. The research committee must consist of at least five members with no fewer than three voting members of the Graduate Faculty (Full or Associate Graduate Faculty status) from the Department of Nutrition and Food Sciences. The other members may be Full, Associate, or Assistant Graduate Faculty from NFS or other departments at TWU, graduate faculty from other educational institutions, or industry professionals with appropriate academic credentials and experience.

All members of the student's research committee, however, must have a doctoral degree. The major professor for the research committee must be a full-time voting member of the Graduate Faculty. Approval must first be secured from the Chair of the NFS department and the Dean of the Graduate School for a non-TWU person to serve on the research committee. The major professor should submit a memorandum accompanied by a copy of the curriculum vitae of the individual explaining the reason for requesting the individual to serve on the research committee. When a student declares a minor, at least one member of the research committee should be from the minor department.

Change of Major Professor/Research Advisor

When a student desires to change major professor or research advisor, the student must complete a form for changing advisor (see NFS departmental office) and secure appropriate signatures before submitting to the NFS Chair. Changing the committee Chair or members of the research committee after a prospectus meeting is discouraged and will be allowed only after approval of the NFS Chair.

Prospectus

Doctoral students must satisfactorily pass both the written and oral qualifying examinations, have an approved degree plan, and be admitted to candidacy before submitting a prospectus and beginning research toward the dissertation.

A prospectus is a document that identifies the research topic, research methods to be used, and the anticipated central hypotheses or research questions. It is anticipated that some preliminary results leading to the hypothesis of the dissertation may be included in the background of the prospectus.

The student, working under the direction of the major professor, develops the prospectus. The prospectus should be prepared according to the [guidelines](#) established by the Graduate School. After the prospectus is approved by the major professor, a copy of the prospectus along with a comprehensive review of literature is given to each committee member at least 10 working days prior to the committee meeting. The meeting for the prospectus should not be scheduled within the period from two weeks before the beginning of the final exam through the second week of the following semester including breaks.

The student, not the major professor, is responsible for scheduling the prospectus meeting and meeting room. If media equipment is required, the student is responsible for making these arrangements in cooperation with the major professor. The major professor chairs the prospectus meeting.

The approved prospectus, with all appropriate signatures, must be filed with the NFS department for routing to the Graduate School.

Dissertation

A dissertation in the traditional format must follow the [guidelines](#) established by the Graduate School. NFS students may choose a non-traditional format to prepare the dissertation. The style and references of the dissertation should follow the format of the leading journal (in Guide to Authors) for the subject area of the dissertation. After a dissertation is written and approved by the major professor, a printed copy (not electronically transmitted) should be given to each member of the committee at least 10 working days before the final oral defense meeting. No meeting will be scheduled during the final two weeks of the semester, during the first two weeks of the next semester, or during semester breaks. The major professor will chair the oral defense meeting.

The major professor and the student are responsible for preparing an announcement of the oral defense of the dissertation accompanied by a copy of the abstract to be posted on the bulletin boards in the department or university at least one week prior to the defense meeting for other interested faculty and students to attend. A copy of the abstract should be attached.

Two forms must be completed.

1. Certification of Final Examination confirms successful completion of the oral exam and is signed immediately after the oral examination.
2. The original copies of the signature page for the dissertation are signed after the student completes all revisions of the dissertation requested by the committee members.

Upon successful completion of the oral defense, the student should finalize the dissertation. The original copy of the Certification of Final Examination should be submitted to the Graduate School. A copy of the Certification of Final Examination should be submitted to the NFS department to be filed.

Forms to be Submitted to the Graduate School

It is the responsibility of the student to submit the signed Certification of Final Examination to the Graduate School.

Dissertation Formats

<i>Traditional Format</i>	<i>Alternate Format</i>
Front Matter	Front Matter
Dedication (optional)	Dedication (optional)
Acknowledgments	Acknowledgments
Abstract	Abstract
List of Tables	List of Tables
List of Figures	List of Figures
Symbols/Abbreviations	Symbols/Abbreviations
Chapter I: Introduction	Chapter I: Introduction
Purpose	Purpose
Hypothesis and Rationale	Hypothesis and Rationale
Scope of the Study	Scope of the Study
Limitations	Limitations
Assumptions	Assumptions
Significance of the Study	Significance of the Study
Definition of Terms	Definition of Terms
Chapter II: Review of Literature	Chapter II: Review of Literature
Chapter III: Methods	Chapter III: Methods (not included in the manuscripts in Chapters IV and V)
Methods	Methods
Research/Experimental Design	Research/Experimental Design
Statistical Analysis	Statistical Analysis
Chapter IV: Results	Chapter IV and V as submitted or accepted manuscripts with specific bibliography
Topic specific subheadings	
Chapter V: Discussion	
Topic specific subheadings	
Chapter VI: Summary, Conclusions, and Recommendations	Chapter VI: Summary, Conclusions, and Recommendations
Summary	Summary
Conclusions	Conclusions
Recommendations	Recommendations
Bibliography	Bibliography
Appendices as appropriate	Appendices as appropriate