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1.0 Introduction and Overview

- The Doctor of Philosophy in Nutrition and Food Systems is designed to prepare individuals for teaching and research positions in universities, administrative positions in institutional food service programs, and research positions in the public and private sectors. The areas of food service and applied nutrition are integrated into a unique graduate program that allows either a general or a more specialized approach to the subject matter areas.

- Students may elect a comprehensive program for practice in settings where nutrition and food service management are equally important (such as child nutrition or healthcare management). Students also may select either applied nutrition or food service management/child nutrition program management as an area of emphasis while developing a broad understanding of both. The course of study is planned individually; faculty advisors review academic background and professional experience in their efforts to help each student articulate specific career goals and select appropriate courses to help meet those goals.

- The Ph.D. in Nutrition and Food Systems is closely integrated with the active nutrition and food systems research agenda at The University of Southern Mississippi.

  - A National Institutes of Health funded initiative focuses on improving health status of health disparate populations in Mississippi through community based participatory research. The Department of Nutrition and Food Systems collaborates with its partner, the city of Hattiesburg, to address cardiovascular health through a neighborhood walking program initially developed and tested in the Mississippi Delta.

  - The Delta Nutrition Obesity Prevention Research Program is a consortium of six universities funded by and in partnership with the U.S. Department of Agriculture, Agricultural Research Service, to prevent obesity in the Lower Mississippi Delta region of Mississippi, Arkansas and Louisiana through research in nutrition and intervention methodology.

  - Other research addressing health disparities focuses on school wellness policy, food insecurity, food accessibility and affordability in rural regions, the role of nutrition literacy in adopting dietary guidelines recommendations.

  - The University of Southern Mississippi also houses the Applied Research Division, National Food Service Management Institute. This national research unit, part of the College of Health, is funded by the U.S. Department of Agriculture to conduct research to improve the general operation and quality of Child Nutrition Programs such as the National School Lunch, School Breakfast, and Child and Adult Care Food Programs.
The PhD in Nutrition and Food Systems prepares its students to understand and address the unique nutritional needs and challenges facing food and nutrition professionals in community settings today. Nutrition and Food Systems doctoral students develop competencies in core areas that include behavioral management, research, food and nutrition public policy, and nutrition theory, that are highly relevant to nutrition research and practice. Graduates of the Ph.D. in Nutrition and Food Systems, educated in nutrition intervention methodology and nutrition care of at-risk populations in community settings, are able to address the challenges of obesity and nutrition-related chronic disease in populations experiencing health disparities.

Nutrition and Food Systems students and graduates have attained national recognition for their achievements. Students have received scholarships and grants from national professional associations and research agencies to fund their research and graduate study. Other achievements of students and graduates include invited presentations at national and regional research meetings, the awarding of the New Researcher Award from the American Dietetic Association, and published abstracts, monographs, journal articles and presentations at national meetings.
2.0 Admission

2.1 Admission Requirements

- Applicants must satisfy the University of Southern Mississippi’s Admission Requirements and Procedures for admission to Doctoral Programs. These are published each year in the Graduate Bulletin. The current Graduate Bulletin is available online via links on the Registrar and Graduate School websites.

- In addition, the Ph.D. program applicant must meet the following requirements:
  - Completion of a master’s degree and specific prerequisite courses based on the area of program emphasis chosen by the applicant.
    - Applicants choosing to emphasize Food Service Management must have completed the following prerequisites: food service management, quantity foods, management, normal/general nutrition, life cycle nutrition, and univariate statistics.
    - Applicants choosing to emphasize Applied Nutrition must have completed the following prerequisites: general, organic and biochemistry; advanced nutrition (nutritional biochemistry/metabolism), anatomy and physiology, food service management, and univariate statistics.
    - Students who have not completed prerequisites may be considered for conditional admission, and if admitted, enroll in prerequisite courses after admission.
  - A minimum grade point average (GPA) of 3.5 on a 4.0 scale is required on previous graduate work.
  - Scores from GRE General Test or Revised General Test, including verbal reasoning, quantitative reasoning, and analytical writing, are required as part of the application. (http://www.ets.org/gre).
  - An up-to-date curriculum vita or resume is required as part of the application. Two years or more of professional experience in nutrition, food service management, or a related area is preferred but not required.
  - A letter of application is required for admission. The application letter should state the intent to emphasize Food Service Management, Applied Nutrition, or both, should include career goals and reasons for pursuing the Ph.D., and should indicate how previous education, research coursework and experience, and work experience have prepared the individual to pursue the Ph.D.
• Three letters of recommendation are required for admission, from professionals who can comment on the applicant’s professional competence and readiness for doctoral work.

• An interview with the graduate faculty in Nutrition and Food Systems is required for admission. This interview can take place by telephone or in person.

• International students should check Requirements for Graduate Students on the International Services website. International applicants must submit TOEFL or IELTS scores. An IELTS score of 7.5, or its equivalent, is required for regular admission.

2.2 Admission Procedures

2.2.1 Application Process

• use the application link on the USM Graduate School website and follow instructions at http://usmgrad.admissionpros.com/for uploading all required application materials. These may include resume, statement of purpose/application letter, unofficial transcripts from each institution attended, contact information for those providing letters of recommendation.

• Create and complete an online admission application. Note: International students must apply through the International Admissions office.

• Complete the GRE Revised General Test and designate the University of Southern Mississippi as a recipient for your scores.

• Upload unofficial transcripts and request that official transcripts from all institutions attended be forwarded to Graduate School, 118 College Dr. #5024, Hattiesburg, MS 39406-0001. International applicants forward to The University of Southern Mississippi, International Student and Scholar Services 118 College Drive #5151, Hattiesburg, MS 39406-0001.

• Upload to the application website a letter of application and a current resume or curriculum vitae.

• Submit contact information using admissionspro for three letters of recommendation from professionals including former professors who can comment on the applicant’s professional competence and readiness for doctoral work.

• Contact Department Chair to schedule an interview (telephone or in-person) with NFS faculty. This interview takes place after all application materials have been received at USM.
2.2.2 Review of application

The Nutrition and Food Systems Graduate Admissions committee reviews the complete application packet, and evaluates the applicant’s GRE scores, GPA for M.S. degree, research preparation, prerequisite courses, letters of recommendation, curriculum vitae, letter of application, and interview using a standard evaluation metric. Based on the rating of each of these components, a summative admission score is calculated, and a recommendation is made by the committee for regular, conditional, or deny admission. (Note: The Graduate School requires a minimum GPA on previous graduate coursework of 3.5 for regular admission. The Department of Nutrition and Food Systems requires that international students have a minimum IELTs score of 7.5, of its equivalent, for regular admission). A formal admission recommendation of regular, conditional, or deny admit is made in turn by the department chair, the Dean of the College of Health, and the Graduate School Dean. The Graduate School notifies the applicant of his/her admission status.

3.0 Graduate Assistantships

3.1 Types of Assistantships
   - Research and teaching assistantships for PhD students are available with the Department of Nutrition and Food Systems.

3.2 Application Procedure
   - Submit a letter indicating your interest in applying for a graduate assistantship, and a resume/c.v., to the Chair, Department of Nutrition and Food Systems, 118 College Drive #5172, Hattiesburg, MS 39406 or email the same to nfsinfo@usm.edu with Graduate Assistantship application in the subject line. Additional information is available on the Graduate School website. Follow link for Financial Information/Funding Resources.
   - Interview with the faculty administering assistantship funding (department chair and/or grant principal investigator).

3.3 Assistantship Award
   - Assistantships are awarded by the department entities on a competitive basis to full-time students in Nutrition and Food Systems.
   - Assistantships provide a monthly stipend and resident tuition scholarship. Graduate assistants must meet the term specified for the position, including 20 hours per week of work under the supervision of the one or more faculty members.
4.0 Degree Requirements

4.1 University Doctoral Degree Requirements
NFS students must meet University Doctoral Degree Requirements. These are described in the Graduate Bulletin. The current bulletin is available online as a link from the Graduate School website, and also from the registrar’s website. Please consult the Progress to Degree Forms Excel Workbook under the Current Students link on the Graduate School website, and the NFS Ph.D. Plan of Study template.

4.1.1 Time Limitations

- The student must complete the doctoral degree within eight (8) calendar years from the date of initial enrollment. Six years is the maximum age allowed for coursework other than dissertation and research hours toward a graduate degree.

4.1.2 Credit Hour Limitations

- Transfer of credit for graduate work done at other institutions must be approved by the department chair and Graduate Coordinator. Transfer of credit is limited to not more than six (6) semester hours beyond the master’s degree. Exceptions can be made only with the approval of the department chair and program director. Approval for transfer of credit is requested using the Transfer Credit Approval form, part of the Progress to Degree Excel Workbook.

- Credit earned as a non-degree graduate student cannot be applied toward a doctoral degree.

4.2 Curriculum

The NFS Ph.D. curriculum includes 54 credit hours beyond the master’s degree. Additional courses beyond the 54 hours may be required if judged necessary by the student’s graduate committee. (Note: the research tool hours are not included in the 54 hour requirement).

- Core Requirements: Fifteen (15) semester hours are required, consisting of the following courses:
  - NFS 810: Food and Nutrition Public Policy (3 hrs)
  - NFS 774: Management of Nutrition Services: A Behavioral Approach (3 hrs)
  - NFS 703: Research Techniques for Nutrition and Food Systems (3 hrs)
  - NFS 820: Theories in Nutrition and Food Systems Research (3 hrs)
  - NFS 811: Doctoral Seminar (2 hrs)

- Dissertation: Twelve (12) hours are required.
  - NFS 898: Dissertation (12 hrs)
• Other Course Work: Select 28 hours from nutrition and food systems and supporting discipline(s). Specific courses must be approved by the student’s graduate committee.

• A minimum of six (6) hours must be taken from discipline(s) outside nutrition and food systems (NFS). These might include courses from business, adult education, community health, higher education, or human performance. REF 889 is a recommended course for students who are preparing to develop their dissertation prospectus. Supporting courses from other disciplines will be identified by the student and advisor, and approved by the advisor and/or student’s graduate committee.

• A minimum of nine (9) hours must be taken from NFS courses.

4.3 Research Tools

Statistics

• Nine (9) hours selected from the following courses or their equivalent
  CHE 623: Biostatistics
  REF 761: Quantitative Analysis I
  REF 762: Quantitative Analysis II
  REF 824: Advanced Experimental Design
  REF 830: Multivariate Analysis
  PSY 764: Factor Analysis

• Hours taken to meet Research Tool requirement do not count toward the 54-hr degree requirement.

• Equivalent coursework taken at another institution must be approved by the student’s graduate committee before enrollment.

• If any of the approved courses were taken as part of the requirements for the master’s degree, they may count toward meeting the PhD statistics proficiency only if taken within five years prior to beginning the degree.

• The third statistics course should be deferred until the dissertation proposal has been prepared, should be selected with the student’s particular research design in mind, and should be approved by the student’s doctoral committee prior to enrolling in the course.

Other Research Tool Requirement

• Additional research tools requirements are determined by the graduate faculty in Nutrition and Food Systems and the student’s graduate committee.
4.4 Residency Requirements

4.4.1 University requirement for doctoral student academic residency

- Refer to university doctoral degree residency requirements in the current Graduate Bulletin, available on the registrar and Graduate School websites.

- The minimum academic residency requirements for the doctoral degree can be fulfilled by the completion of 24 hours of continuous graduate study on campus within two consecutive semesters, one of which can be the full summer session. During this period the student is obligated to devote full time to graduate work and to earn at least 12 semester hours of credit in each of the two semesters. For the nontraditional student, it may be possible to comply with one of three alternative residency requirements.

- Academic Residency may begin only after the student is admitted to a doctoral program as a regular student.

- Note: Academic residency differs from residency for the purpose of qualifying for resident tuition.

4.4.2 Alternate academic residency requirement

- The approval of an alternate academic residency requirement may be granted upon the recommendation of the student’s advisor and graduate committee. The student should file a plan for meeting the residency requirement with her/his advisor prior to beginning academic residency.

- The student must be enrolled three consecutive semesters during which the student devotes the equivalent of three days per week to graduate study, earns a minimum of nine semester hours credit for each of three semesters, and presents evidence that the student’s employment work load (if applicable) has been adjusted to permit compliance with residency requirements OR

- The student must be enrolled two semesters (one of which may be a summer session) within a three-year period during which the student devotes full time to graduate study and earns a minimum of 12 semester hours of credit in each of the two semesters. In addition, the student shall enroll for a minimum of three semester hours of credit in each of the intervening semesters OR

- The student must be enrolled for six semesters, four semesters of which must be consecutive. In each of the six semesters, the student must earn a minimum of six semester hours of credit, excluding Special Problems and Independent Study.
4.5 Research and Scholarly Integrity Assurance Program

All graduate students must complete required training modules as part of the Research and Scholarly Integrity Assurance Program during the first semester of enrollment. Training requirements are found on the USM Office of Research Integrity website.

4.6 Qualifying Examination

The student’s first enrollment in NFS 811, Doctoral Seminar, serves as a time to evaluate each student’s strengths and weaknesses related to performance expectations in the doctoral program. The NFS 811 course requirements for a research paper and presentation are also considered to be the doctoral qualifying examination. Students must make satisfactory performance on these assignments in order to continue in the doctoral program. If performance is satisfactory but weaknesses are identified, for example limitations in research writing skills, a plan for remediation will be developed by the student’s advisor and the graduate coordinator, based on recommendations of the instructor of the Doctoral Seminar. This plan could include additional coursework that is not part of the required 54 doctoral hours.

4.7 Comprehensive Examination

4.7.1 Schedule and Administration

- Students take the comprehensive examination after the majority of course work is completed, with 10 hours or less of course work remaining, excluding dissertation hours.

- Comprehensive examinations are administered once each semester, during the first week of the semester.

4.7.2 Format

- The written exam is administered over a period of two eight-hour days, with the first day devoted to the PhD core competencies, and the second day to questions from the student’s doctoral committee (see Section 5.2), with each committee member contributing an equal share of content/questions. Students use computer and word processing software to write exam (or can elect to write exams by hand).

- The oral exam is administered within one month of the written examination and covers similar content. While the oral examination covers the same content areas as the written examination, it may be focused somewhat more heavily on weaknesses in the student’s written performance.
4.7.3 Content

- The exam content for the first day covers the core competencies including integration of nutrition and food systems, research, food and nutrition public policy, behavioral management, and theories in nutrition and food systems research (Appendix).

- The content for the second day focuses more broadly on the student’s overall graduate curriculum. Questions are prepared by the student’s graduate committee.

- The comprehensive examination tests higher order skills in the cognitive domain, including analysis and synthesis. It focuses on critical thinking skills and applications over the entire PhD curriculum. While it may include content related to specific courses taken by the student, it is not intended merely to test knowledge in a specific content area.

- Students should prepare for the examination by systematically reviewing content related to the core competencies, including content covered in specific courses in the curriculum and in the curriculum as a whole, as well as recent research and public policy in the area of nutrition and food systems relevant to the core competencies. Students should meet with each of their committee members at least six months prior to the scheduled exam, to identify broadly the content area for each committee member’s question. As with the core competency questions, they should prepare by reviewing content from specific courses in the curriculum and the curriculum as whole, as well as recent research and public policy in the area of nutrition and food systems relevant to the curriculum and course content.

4.7.4 Grading

- Students are awarded a grade of high pass, pass, low pass, or fail on each written section.

- If a student fails one or more sections of the examination, the student’s committee will review the weaknesses manifested in the exam performance, and develop a remediation plan for the student. This could include additional coursework or other activities for the student to complete prior to retaking the exam. If a student fails one section of the written examination, the oral examination for that section only may be deferred to a later date. If a student fails more than one section of the written examination, the entire oral examination will be deferred to a later date.

4.7.5 Responsibilities for Comprehensive Examination

- The NFS 811 instructor reviews PhD core competencies with enrolled students during their initial enrollment in NFS 811.
The student’s advisor/doctoral committee chair/major professor (See Section 5, Advisement and Monitoring of Student Progress) monitors advisee’s readiness to take comprehensive examination (based on completion of coursework) and informs Graduate Coordinator two semesters prior to the testing semester.

The student is responsible for meeting with each doctoral committee member, and with other NFS faculty overseeing core competencies, one to two semesters prior to taking the exam, to seek guidance in preparing for the exam.

The Graduate Coordinator coordinates administration of the comprehensive examination, and files the “Results of Comprehensive and/or Qualifying Exams” form with the Graduate School.

4.8 Admission to Candidacy
The student is admitted to candidacy when the student has successfully passed the Doctoral Comprehensive Examination.

4.9 Continuous Enrollment
University policy requires students to enroll continuously after they have taken required course work until they complete the degree (see Doctoral Degree Requirements in the Graduate Bulletin).

4.10 Application for Degree
At least one semester prior to graduation, the student submits the Application for Degree, (see Degree and Graduation Information, Graduate School website) with appropriate signatures, to the Graduate School office, with a copy retained by the student, the advisor and the NFS Department office. Deadlines are published on the Graduate School and the University Registrar websites.

4.11 Dissertation – also see NFS 797 and 898 syllabi
The Graduation and Thesis/Dissertation Deadlines are published by the Graduate School (see Graduate School website) and include various milestone dissertation deadlines that must be met in order to insure graduation in a particular semester.

4.11.1 Topic
- The dissertation topic must be an original and significant contribution to knowledge in the chosen field.
- The dissertation topic must be theoretically based.
4.11.2 Dissertation Proposal/Prospectus

- The format for the dissertation prospectus is found in the appendix. Format is reviewed during enrollment in NFS 811, Doctoral Seminar and with initial enrollment in NFS 797 of NFS 898 for dissertation proposal development. The proposal includes three sections or chapters: 1) the introduction which includes the introductory literature review, significance and justification for research, and research questions, objectives and/or hypotheses; 2) the review of literature, and 3) the research methodology.

- The student develops the dissertation proposal, including the theoretical framework, with oversight from her/his committee chair/major professor, seeking input from the doctoral committee. The student enrolls in NFS 797 or 898 under his/her major professor while completing the proposal.

- With approval from the committee chair, the student formally presents her/his dissertation prospectus/proposal to the doctoral committee for approval. The student schedules a meeting of the committee, and provides a copy of the proposal to each member two weeks or more prior to the meeting. The student makes a formal oral presentation of the proposal to the committee, with a powerpoint presentation focusing on the background, significance, research questions, and methodology. Other faculty and graduate students are invited to attend the proposal presentation. Following the presentation and an opportunity for questions from the audience, guests are excused. The doctoral committee then asks questions of and makes recommendations to the student. The committee will either approve or not approve the proposal at this time using the Dissertation Proposal or Prospectus Approval Form, which is then filed with the Graduate School. The proposal may be approved with some required modifications. Required modifications are indicated in writing to the student, and the student must satisfactorily address these requirements before final approval of the Dissertation Proposal is completed.

- Once the dissertation proposal is approved, the student may enroll in NFS 898, dissertation hours, to complete the remaining work on the dissertation. The doctoral committee must approve the dissertation proposal before any primary data collection may begin.

- If human subjects are involved in the research, the USM Institutional Review Board (Human Subjects Protection Review Committee) must approve the proposal methodology and consent process before data collection may begin. The Human Subjects Review application forms and submission guidelines are available online. Follow the Research link from the Southern Miss homepage. The dissertation proposal must be approved by the student’s committee before IRB approval can be obtained.

- A separate bulletin outlining University requirements concerning preparation of theses is available on the Graduate School website.
4.11.3 Dissertation format
- Guidelines for the format of the dissertation document are found in the NFS 898 syllabus

4.11.4 Defense
- After the dissertation has been accepted by the committee chair and after any remaining required course work has been completed, a final oral examination (defense) on the dissertation and related areas is conducted by the student’s doctoral committee. Deadlines for the defense for each semester are found on the Graduate School website.
- The student schedules the oral defense of the dissertation with her/his committee members, and the committee chair invites other NFS faculty and graduate students to attend the defense. The student provides a copy of the dissertation to each committee member at least one week prior to the scheduled defense.
- For the defense, the student makes a formal presentation on the dissertation to include introduction, research questions, methodology, results, discussion, conclusions, and recommendations. Following an opportunity for questions from the general audience, the guests are dismissed and the graduate committee conducts the oral examination, led by the committee chair.
- At the conclusion of the dissertation defense, the doctoral committee determines the outcome of the oral examination. The outcome may be 1) approved with no revisions, 2) approved pending revisions, or 3) not approved. The committee chair completes the Results of Oral Defense of Dissertation form, obtains signatures of committee members and Department Chair, files original with Graduate School and copies as indicated on the form.

5.0 Advisement and Monitoring of Student Progress

5.1 Initial Advisor
- The Graduate Coordinator appoints an initial academic advisor for each entering student.
- The initial advisor performs appropriate advisement responsibilities as described in Section 5.3 until appointment of the student’s doctoral committee.

5.2 Doctoral Committee

5.2.1 Composition
The doctoral committee is composed of a chair (major professor) and at least three other members, all of whom are members of the Regular Graduate Faculty of The University of Southern Mississippi with approval to serve as members of a doctoral committee.
- The chair is a member of the NFS faculty with doctoral directive graduate faculty status.

- Two to three committee members, in addition to the chair, are members of the NFS faculty and one committee member must be external to the NFS program. External members may include a statistician, or other departmental faculty at USM. Members external to the NFS department are chosen based on the student’s research topic and additional expertise needed to advise the student in her/his chosen research area. That expertise may be in statistical analysis, qualitative research, or a content area outside of NFS.

- An additional member (beyond the required five) from outside the university may serve on the doctoral committee if that individual has specialized expertise needed by the student and is approved for graduate faculty status by the Graduate Council. Approval paperwork can be found on the Graduate School website.

5.2.2 Selection and Appointment

- The doctoral committee is recommended by the department chair and appointed by the Graduate School. The USM Graduate Committee Request Form is filed with the Graduate School by the faculty advisor or doctoral committee chair after obtaining the Department Chair approval by signature (see Progress to Degree Excel workbook on the Graduate School website).

- The doctoral committee chair and members are identified by the student with appropriate faculty oversight from the initial advisor, the NFS Graduate Coordinator, and/or the selected doctoral committee chair.

- The doctoral committee is selected at least one semester prior to the student beginning preparation to take the comprehensive examination.

- With the appropriate approvals, the composition of the doctoral committee may be altered at the point of dissertation prospectus development, in accordance with the dissertation research plan. A new Graduate Committee Request Form must be filed with the Graduate School.

5.2.3 Responsibilities

Once appointed, the doctoral committee chair and members perform appropriate advising and monitoring responsibilities as described in Section 5.3.
5.3 Advisement and monitoring responsibilities

5.3.1 Conditional admission

- The advisor monitors student progress toward meeting admission conditions.

- The advisor requests permission of the Graduate School by memo for the conditional student to register (except for semester of admission).

- When student meets the conditions of admission and achieves regular admission status, the advisor submits a Change of Status form (part of Progress to Degree Excel workbook). Approvals of advisor, chair, and Graduate School are required.

5.3.2 Plan of study

- The student meets with the initial advisor each semester until the doctoral committee is established. The advisor assists the student in planning coursework, approves the student’s course selections, and flags the student for registration after advisement takes place.

- The doctoral committee chair/major professor guides the student in developing the plan of study, and assists the student in completing and filing the Plan of Study with the Graduate School. The Plan of Study form is found on the Graduate School website. The Plan of Study is filed with the Graduate School after the first semester of full-time study (or its equivalent) is completed. The Plan of Study is approved by the advisor and the Department Chair before filing.

5.3.3 Completion of doctoral degree requirements

The student and her/his advisor/major professor regularly evaluate the student’s progress and completion of doctoral degree requirements described in section 4. The plan of study and transcript can be used for that purpose.

6.0 Affirmative Action/Equal Employment Opportunity Policies

AA/EEO policies are found on the university website, at http://www.usm.edu/aa-eeo/aaeeo-policies. These include policies on nondiscrimination, sexual harassment and sexual violence, and consensual relationships. Each student should review and familiarize him/herself with said policies.
PhD Core Competencies

Upon completion of the coursework for the PhD in Nutrition and Food Systems the candidate will be able to:

**Integration of Nutrition and Food Systems**
- Discuss the interrelationships between nutrition and food systems in providing services to clientele
- Discuss how the disciplines of nutrition, food, foodservice systems management and natural, behavioral, and social sciences are integrated.
- Analyze (a) specific food/nutrition service(s) in terms of strategies and resources required to deliver effective services to groups. Provide examples where pertinent.
- Create an ideal scenario where nutrition and food systems are effectively integrated to deliver services to clientele.

**Research**
- Recognize purposes of research, types of research, and theories within the applied nutrition and food systems literature.
- Discuss criteria for developing theory-based research in applied nutrition or food systems
- Critique published research articles based on stated objectives, study design, analyzes of data, and conclusions/applications.
- Discuss researchers and critique seminal research in areas of applied nutrition or food systems literature.
- Suggest additional studies in a specific area to enhance the literature.
- Analyze valid and reliable research methods (objectives, research designs, sampling techniques and designs, measurement and scaling, questionnaire development, data collection procedures, data analyses and interpretation and inferences)
- Formulate an original research question.
- Design appropriate research in an area of interest.
- Develop a written plan, efficaciously execute the plan, and appropriately disseminate findings and conclusions of a theory-based dissertation in nutrition and food systems.

**Behavioral Management**
- Apply behavioral science theories and concepts to nutrition and food systems
- Assess trends in the general environment and evaluate their impact on the food and nutrition industry. Based on these trends, evaluate skills needed by nutrition and food systems leaders to be successful in the 21st century.
- Evaluate factors influencing work group cohesiveness, effectiveness, communication and problem solving as they apply to nutrition and food systems
- Evaluate the effects of leadership style on productivity, work group effectiveness, employee satisfaction, and organizational growth in a nutrition or food system.

**Public Policy in Food and Nutrition**
- Describe the public policy making process
- Analyze the development of U.S. food and nutrition policy from a historical perspective.
- Synthesize facts and trends impacting policy development in food and nutrition at the present in the past five years.
- Evaluate the impact of current food and nutrition policy on various segments of society, e.g. the poor, the food industry, consumers of health care.
- Advocate for participation in the policy making process by professionals in nutrition and food systems.

**Theories in Nutrition and Food Systems Research**
- Describe the role of theories, constructs, and models in nutrition and food systems research.
- Identify and evaluate theories, constructs, and/or models supporting or undergirding research in selected areas of food systems or applied nutrition.
- Evaluate the strengths and limitations of specific theories, constructs and/or models as applied in research in food systems or nutrition.
**Dissertation Format Options**

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