

Graduate Student Handbook

for
Students Pursuing
a Master of Science Degree
in Nutritional Science

California State University, Long Beach

Department of Family and Consumer
Sciences
College of Health and Human Services
California State University, Long Beach

<http://www.csulb.edu/colleges/chhs/departments/fcs/>



Dear Student:

Welcome to the Master of Science Program in Nutritional Science! We are excited that you chose to continue your studies at California State University, Long Beach, and we feel confident that you will find that your time here prepares you well for your future career and/or educational goals.

Sometimes students ask what they will experience as a graduate student. There are many ways to answer this question, but here are a few:

1. It is a time for growth. As a graduate student, you can choose a specialized program of study that coordinates with your goals. As you engage in coursework and prepare for the research process, you will develop enhanced knowledge and skills and develop a theoretical base for future practice and lifelong learning.
2. It is a time for enhanced engagement and collaboration with peers. Graduate classes have fewer students, and students are held to a higher level of expectation. Student-led discussions, collaborative projects, and creative applications of course content are among the experiences graduate students should experience in the classroom.
3. It is a time to ask questions. A curious mind that integrates classroom learning, work experience, and life experience is a mind prepared for graduate research. Your research as a graduate student should prepare you to understand the importance and application of research to nutrition practice. It should equip you with skills to conduct research in the future. And it should engage you in a process of inquiry that has the end goal of improving the nutrition status of people.

This handbook was written with the intention of introducing you to the policies, procedures, and expectations of graduate students, with a particular focus on the research process. The checklist at the end of the handbook can be used to guide you through the steps towards completion of the MS degree.

Welcome to the program!

A handwritten signature in cursive script that reads "VB Gray".

Virginia B. Gray, PhD, RD
Graduate Coordinator

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Program Goals and Learning Outcomes

The goals of the Master of Science Program in Nutritional Science are to:

- Provide didactic and experiential education in nutrition science and courses of specialization to build a strong knowledge base for future practice;
- Provide an interdisciplinary curriculum (e.g., courses in sports nutrition, exercise science, public health, food science, and epidemiology) that allows students to develop particular competencies related to their career aspirations;
- Foster conceptual skills in planning, carrying out, and evaluating research activities;
- Increase skill in curriculum development (for students completing a directed project) or ability to conduct qualitative and quantitative research (for students completing a thesis);
- Prepare students to critically use research findings to inform practice decisions;
- Prepare students for disseminating research findings to contribute to the body of knowledge in the field of nutrition;
- Expand engagement with social and cultural factors that impact nutrition status such that ability to practice in a multicultural environment is increased;
- Increase mastery in food and nutrition subject matter in preparation for college teaching, research, graduate study beyond a master's degree and administrative positions in public and private agencies; and
- Maintain a cutting-edge curriculum by regularly evaluating contents of core courses to respond to current trends.

Program learning outcomes for the Master of Science Program in Nutritional Science include:

- A. Demonstrate proficient oral and written communication skills;
- B. Demonstrate critical thinking skills in solving complex problems in nutritional science;
- C. Evaluate social and cultural factors in conceptualizing nutrition interventions in a multicultural environment;
- D. Master breadth of knowledge in key nutritional science areas, including macronutrients, micronutrients, community nutrition, and research methods;
- E. Critically use nutrition-related research findings, standards of practice, and ethical standards to inform practice and research decisions; and
- F. Design and conduct an independent research project (a thesis or directed project).

Commitment to Diversity. In addition to meeting fully its obligations of nondiscrimination under federal and state law, CSULB and the Master of Science Program in Nutritional Science Program are committed to creating a community in which a diverse population can live, learn, and work in an atmosphere of tolerance, civility, and respect for the rights and sensibilities of each individual, without regard to economic status, ethnic background, political views, or other personal characteristics or beliefs.

Programs and services to assist students can be found on the Division of Student Affairs website [here](#).

Information on specializations is provided below.

Latino Health

Students who choose this specialization may enroll in to receive a Graduate Certificate in Latino Health and Nutrition Studies. The Graduate Certificate in Latino Health and Nutrition Studies is offered to all students currently enrolled in a CSULB graduate program. Graduates across diverse health and human service occupations will be prepared to meet the needs of California and the nation's growing Latino population. The Certificate includes:

- An overview of Latino-specific health from early childhood to the development of chronic diseases that impact Latinos across the lifespan;
- The development of culturally and linguistically relevant interventions;

- Strategies for implementation of chronic disease prevention best practices; and
- Experience and development of skills in community-based participatory research.

Internship Program in Nutrition and Dietetics

The Internship Program in Nutrition and Dietetics emphasis is available to students admitted to the program through the DICAS process.

The Mission of the Internship Program in Nutrition and Dietetics (IPND) is to provide contemporary training of entry-level nutrition professionals who will become valued leaders in multi-ethnic communities, healthcare programs and food production settings for the years 2012-2022. The two major goals of the IPND are:

1. To prepare entry-level dietitians who can apply the science of nutrition for the well-being of individuals throughout the lifecycle, and
2. To prepare graduates who are dedicated and confident in their profession.

The IPND has a "Nutrition across the Life Cycle Communication" (NALCC) Concentration. The concentration is designed to develop unique communication, education and health promotion skills. These skills will enhance the ability of graduates to interview, counsel, and guide individuals with nutrition decisions and eating behaviors at all ages of individuals across the life cycle. In addition, the concentration prepares graduates with the ability to develop health promotion and chronic disease prevention programs for individuals and groups.

The IPND provides 1,200 hours of practicum experience (NUTR 591A: Professional Practicum in Dietetics) within a broad array of disciplines including nutrition therapy, foodservice systems management, community and business / entrepreneurial nutrition. The practicum is conducted off campus at a variety of excellent facilities including, but not limited to, medical centers, health departments, school districts and community service organizations.

Nutritional Science

The Nutritional Science emphasis allows students to select coursework in alignment with career aspirations, in consultation with a faculty advisor. See page 7 for suggested courses.

Food Science

Food science is the discipline in which biological, physical, and engineering sciences are used to study the nature of foods, causes of deterioration, and principles underlying food processing and the improvement of foods for the consuming public. The food science emphasis prepares students for a variety of food science-related career options, including research and product development, food technology, quality assurance, food law compliance, consumer protection, food microbiology, food chemistry. Students who choose this emphasis will complete the following courses:

FSCI 532*	Food Analysis
FSCI 535*	Food Processing, Preservation, and Packaging
FSCI 592	Internship in Family and Consumer Sciences/Gerontology
FSCI 597	Independent Study
FSCI 590*	Food Product Development (cross listed with FSCI 469)

3 units of elective to meet student needs (marketing, etc.)

*The requirements of graduate students enrolled in these cross-listed courses exceeds undergraduate student requirements, including teaching lectures, an independent research paper, and supervising labs.

Graduate Student Policies

Introduction

This document reflects both policy and common practice in the Department of Family and Consumer Sciences (FCS). Additional documents are also helpful, including the FCS website, the University Catalog, and the university's thesis website (which contains important format and date information).

Requirements for Completion of MS Degree

1. Complete a minimum of 36 units
2. Maintain a 3.0 or higher GPA
3. Complete Thesis or Directed Project
4. Complete oral presentation of the Thesis or Directed Project
5. For students enrolled in CSULB's Internship Program in Nutrition and Dietetics (IPND), complete additional requirements for completion of the MS/IPND

Enrollment

Graduate students must maintain continuous enrollment in both fall and spring semesters to maintain graduate status. This can be done through 1) registering for a class; 2) taking an educational leave (up to four semesters); 3) registering for GS 700 if student enrolled in 3 units of NUTR 692 or 698 but did not receive a grade. Student must be registered in the semester in which they graduate. Note: If a student has not completed the requirements of NUTR 692 or 698 at the end of the semester of enrollment, the student will receive an "RP" (Report in Progress) which will be changed to a letter grade once requirements are met. The degree must be completed within seven years of admission.

Late Enrollment (After the Deadline for Late Enrollment)

To petition for late enrollment in NUTR 692 or 698 (after the deadline for late enrollment), please consult with your thesis/directed project committee chair about the process of late enrollment. The student will write a letter to petition for late enrollment. Instructions for late enrollment are available in hard copy at Enrollment Services.

Graduate Studies (GS) 700

The deadline for graduate students to register for GS 700 is the end of the add-drop period of the semester or other session in which the student wishes to maintain continuous enrollment for the purpose of completing the culminating activity or graduating. By policy, GS 700 can only be taken after all other coursework has been completed. If a graduate student wishes to take a semester off before resuming coursework, s/he must take a Planned Educational Leave, not GS 700. GS 700 may only be taken twice. To register for GS 700, students must send an email to the Graduate Coordinator requesting a permit to enroll.

Course Requirements

Students must complete a minimum of 36 units. A set of core courses is required for all students, and a capstone course (NUTR 692: Directed Project or NUTR 698: Thesis) is required. Suggested courses for each specialization (Nutritional Science, Latino Health and Nutrition, Food Science, and Internship Program in Nutrition and Dietetics (IPND)) are listed below.

Take all of the following core courses (18 units):

EDP 519 or HSC 503 or statistics course approved by the faculty advisor.

NUTR 530A Carbohydrates, Lipids and Proteins (3) (Fall only)

Prerequisites: NUTR 436B, NUTR 335.

NUTR 530B Vitamins and Minerals (3) (Spring only)

Prerequisites: NUTR 436B, NUTR 335

NUTR 531: Advanced Community Nutrition (3) (Spring only)

Prerequisites: NUTR 436B, NUTR 335, NUTR 461

NUTR 696 Research Methods (3) (Fall only)

Prerequisites: Upper-division course in statistics.

NUTR 697 Directed Research (3) (Spring, Fall, and Summer)

Prerequisites: Advancement to candidacy.

Take one of the following capstone courses (3 units):

NUTR 692 Directed Project (3) (Spring, Fall, and Summer)

Prerequisite: NUTR 697.

NUTR 698 Thesis (3) (Spring, Fall, and Summer)

Prerequisite: NUTR 697.

Completion of one of the following emphases (15 units):

1. Select 5 courses for the **Nutritional Science** emphasis.

NUTR 539, 570, 580; NUTR/KIN 568; BIOL 590; HSC 430, 500, 507; KIN 551, 566; GERN 563

Or other courses selected in consultation with the Graduate Advisor. Note: Courses in the Latino Health and Nutrition emphasis can also be taken.

2. Enroll in 5 courses in the **Latino Health and Nutrition** emphasis.

HSC 507; NUTR or HSC 534; NUTR or HSC 537; HHS 592A, 634, 635

3. Select 5 courses in the **Food Science** emphasis.

FSCI 532, 535, 592, 597, and 6 units of electives selected in consultation with Graduate Advisor.

4. Academy of Nutrition and Dietetics Accredited **Internship Program in Nutrition and Dietetics (IPND)** at CSULB:

NUTR 591A Professional Practicum in Dietetics (3, 3, 3 units)

NUTR 591B Seminar in Dietetic Practice (3, 3 units)

Note: Students may choose to take an additional elective if desired.

Please see the University Catalog for course descriptions.

Advancement to Candidacy

After successful completion of NUTR 696, but prior to enrolling in NUTR 697, students must be *advanced to candidacy*. “Advancement to candidacy” means that a student is ready to start research leading towards a thesis or directed project. Students must be enrolled in the University during the semester that they advance. In order to be advanced to candidacy, a student must meet the following requirements:

- Completion of nine (9) graduate level units including NUTR 696.
- Successful completion of the Writing Proficiency Examination (WPE). A GRE analytical writing score of 4.0 will satisfy this requirement.
- A cumulative grade point average (GPA) of 3.0.
- Completion of the Program of Study form with FCS Graduate Coordinator.

After a student has been advanced to candidacy, s/he will be eligible to enroll in NUTR 697 and can begin to conduct research. The student must submit the Petition to Enroll in NUTR 697 (available on the FCS [website](#)) to the FCS Graduate Coordinator.

Guidelines for Theses/Directed Projects (T/DP)

Overview

After students are formally “advanced to candidacy,” they are eligible to begin work on a T/DP. During the course of writing the thesis or directed project, students will be enrolled in the following courses:

- NUTR 697: Directed Research. Students enrolled in NUTR 697 will work under guidance of the thesis/directed project chair to write their research proposals to include the introduction, review of literature, and methods (chapters 1–3) written in future tense.

AND

- NUTR 698: Thesis. Students enrolled in NUTR 698 will write thesis chapters 4-5 (results and discussion) and change chapters 1–3 to past tense once completed.

OR

- NUTR 692: Directed Project. Student enrolled in NUTR 692 will write directed project chapters 4–5 (results and discussion) and change chapters 1–3 to past tense once completed.

To receive a grade in NUTR 697, students must receive approval of the research proposal by obtaining signatures of all committee members on the Thesis/DP Proposal Approval Form (available on the FCS website). After receiving approval of the research proposal, students are eligible to enroll in NUTR 692 or 698.

For more details on requirements for these three courses, please see pages 18–20.

Committee Membership

Students must choose a chair for their T/DP. The committee chair must be a tenured or tenure-track faculty member in FCS. A list of faculty members who can serve as committee chairs appears on page 11. It is the chair’s responsibility to work with the student on chapters 1–3 which constitute the proposal for the T/DP. The chair and student work together on multiple drafts until the proposal is satisfactory to both, at which time other points of view would be beneficial. It is not the practice of FCS to provide multiple drafts to the entire committee.

The second committee member must be either a tenured or tenure-track faculty member or lecturer at CSULB. The third member may be either from CSULB or from outside the university, but must possess a minimum of a master’s degree. A fourth member is neither needed nor recommended. All committee members must have a minimum of three years of work experience after earning the Master’s degree. It is the role of the committee members to read, review and provide feedback (edits, content, methods, organization, coverage, etc.) to the student after the chair has reviewed and approved the T/DP. Committee members must be given two weeks for review. The committee member may request either a hard paper copy or an electronic copy, which the student will provide.

Requirements for Thesis/Directed Project Drafts

Students will consult with and adhere to the following when creating all drafts for the proposal and final document:

1. The CSULB format for the document should be followed (see thesis reviewer's website at <http://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/submissions/formatting-guide>).
2. All drafts should be provided to committee members with a minimum of two weeks for review. Students will consult with all committee members for their preferred method of submission (hard copy in mailbox, e-mailed files, other). **Student should work with thesis/directed project chair at the beginning of each semester to develop a schedule for writing chapters and eliciting feedback.**
3. Tables and appendices should be referenced within the text, typically in chapters 3, 4, and 5. This is true regardless of whether the endeavor is a thesis or directed project.
4. For the thesis, hypotheses should be written in the null form, per FCS policy.
5. For the directed project, when developing curricula, the student should create original work, and properly cite all "borrowed" reference materials.
6. The onus of responsibility for grammar and punctuation is on the student, not the committee members. Committee members should provide expertise regarding the content of the thesis, the research methods, and the contributions of the study to the field of knowledge. Please be sure that your paper is well edited prior to submitting to committee members. Particularly consider the following:
 - a. All references (in text and in references) should be thoroughly checked for consistency with the current American Psychological Association (APA) format (see the *Publication Manual of the American Psychological Association*).
 - b. Attention should be given to consistency of wording and punctuation. For example, you should not have "childcare" and "child care" used in the same document. Students may find it helpful to keep a master list of phrases/titles to be sure they are used consistently. Also, if the Oxford comma (comma before a conjunction in a series of three or more terms, such as in apples, oranges, and grapes) is used, do so consistently throughout. If you use two spaces after a period, do so consistently throughout.
 - c. Please refer to the APA manual, 7th ed. for correct use of numerals. Check for common portrayal of numbers. Do not use 27% in one place and 27 percent in another. Numbers under ten are written out (except when associated with time).
 - d. Reserve quotations for meaningfully written statements whose meanings would be lost with alteration. Use quotations judiciously, not to avoid rewording a sentence.
 - e. Note: Chapters 2–5 may feel repetitive at the beginning, because students repeat the purpose statement at the beginning of each chapter. A second paragraph may be helpful in explaining what is coming in the chapter.

Sample Memo for Committee Members

When providing drafts to the committee, AFTER the chair and student agree it is ready to go to the committee, the following memo may be provided as a reminder:

Dear Committee Member:

Attached is my thesis/directed project. My chair and I feel it is in good shape and will now benefit from a committee review. The policy of the Family and Consumer Sciences Department is to allow 2 weeks for you to review it. Please let me know if you have any issues in meeting this deadline.

Once you feel my work is completed to your satisfaction, I will ask you to sign the Thesis/DP Proposal Approval Form indicating your approval. If I need to make additional changes before you can sign, please let me know. If you are ready to sign it now, understanding that I will take your suggestions to my chair and

make them to the best of my ability, then please let me know and I will provide the Thesis/DP Proposal Approval Form.

Thank you for your help in completing my project.

Tenured and Tenure-track Faculty who can Chair a Thesis/Directed Project Committee

Below please find the names and selected interests of faculty in the Department of Family and Consumer Sciences. This list provides selected interests, and students should discuss topics and potential committee members with their T/DP chair.

Child Development and Family Studies

Tenured and Tenure-Track Faculty

Dr. Roudi Roy: pregnancy, parenthood, women, children, racial/ethnic diversity

Dr. Nancy Dayne: early childhood teacher education, parent education and involvement, student motivation and efficacy

Consumer Affairs

Tenured Faculty

Dr. Peter Kreysa: consumer advocacy, financial planning, housing, student retention

Dr. Wendy Reiboldt: curriculum development, consumer issues, general FCS issues

Fashion Merchandising and Design

Tenured and Tenure-Track Faculty

Dr. Mariné Aghekyan: consumer behavior, 3D body scanning, fit and sizing

Dr. Marie Botkin: historical fashion, fashion and film, textiles, sustainability and fashion

Dr. Young Ha: consumer behavior, online marketing, visual merchandising

Dr. Suzanne Marshall: curriculum development, advertising, consumer behavior, visual merchandising, the fashion industry

Gerontology

Tenured Faculty

Dr. Maria Claver: gerontology, death & dying, curriculum development, health and aging

Lecturer

Mr. Casey Goeller: gerontology, technology

Hospitality

Tenured and Tenure-Track Faculty

Dr. Lee Blecher: hospitality management/operations, education assessment

Dr. Ryan Giffen: hospitality and institutional foodservice human resources management, hotel/restaurant operations, organizational development and strategy, person-organization fit, abusive supervision in hospitality, personality type alignment with the job role.

Dr. Libby Gustin: ethical foods, sustainable hospitality operating practices

Dr. Ronnie Yeh: hospitality, human resource management, international education, hospitality ethics education, hospitality international education, hospitality human resource management, hospitality customer service management

Nutrition and Dietetics

Tenured and Tenure-Track Faculty

Dr. Michelle Barrack: sports nutrition, the Female Athlete Triad, and evaluating the interrelationships between diet, exercise and bone health among adolescents and young adults

Dr. Rachel Blaine: early childhood nutrition, obesity prevention in child care settings, parenting and child snacking, interventions to promote healthy family habits, use of media and technology in health education

Dr. Gail Frank: nutritional epidemiology of CHD, cancer, diabetes, osteoporosis, and hypertension; dietary methodology in epidemiologic studies; Latino health promotion; health communication; child weight management/obesity; motivational interviewing

Dr. Virginia Gray: community nutrition, school nutrition, global issues in nutrition, social and cultural influences on food habits and nutrition status, curriculum development

Dr. Cheryl Rock: nutritional biochemistry (elicitation of bioactives in food products, mediation on diet related diseases (i.e., cancer) and elucidation of their biological mechanisms of action in vivo and in vitro); food-processing engineering (the use of novel food-processing technologies such as pulsed light and power ultrasound (PU) in retaining or improving the quality/sustainability of food as it relates to the bioavailability and bioactivity of phytonutrients in vivo and in vitro)

Dr. Long Wang: nutritional biochemistry, clinical nutrition, sports nutrition, health disparities, diversity promotion, nutrition education of special population groups

Lecturers (can serve as additional committee members)

Ms. Jessica Beaudoin: nutrition education, clinical nutrition, Latino health, Health at Every Size

Dr. Diane Carson: nutrition education, behavior change, child nutrition, curriculum

Ms. Wendy Devine: sports nutrition, childhood nutrition, weight management, obesity

Ms. Mary Lyons: GI/digestion, food/nutrients, phytochemicals/probiotics, cancer/nutrition and disease, mental health/genetics, weight loss/diets

Mr. Dustin Moore: Health related behavior and habit modification/formation, scientific communication, cultural and social influences on dietary practices, and evidence-based approaches to public policy in health.

Ms. Amanda Saucedo: nutrition technology, apps, behavior change

Thesis Requirements

Purpose

The purpose of the Thesis (NUTR 698) experience is to provide MS graduate students the opportunity to gain experience in conducting qualitative and quantitative research. The student will be responsible for designing and conducting an independent research project.

In consultation with the student's Chair and Committee, the student will create a proposal, attain IRB approval if necessary, conduct appropriate research, analyze data and perform statistical analyses (if necessary), provide a final written report, complete an oral defense of the final thesis to the Committee, and participate in a poster session.

Reasons to Choose NUTR 698

1. Student prefers to conduct theoretical research projects rather than an applied research project (directed project);
2. Student is considering pursuing a Ph.D. in the future.

Appropriate Research Methods in NUTR 698

The following list provides a brief description of research methods that can be undertaken in NUTR 698. The student should consult with his/her Chair and Committee to discuss the method that is optimally appropriate to fulfill the student's long-term academic and professional goals.

1. **Quantitative Research:** Quantitative research includes a range of observational and experimental designs that involve collecting and analyzing numerical data. It can be used to find patterns, make predictions, test causal relationships, and generalize results to wider populations. *Hypotheses* are developed and tested in quantitative research designs.
2. **Qualitative Research:** Qualitative research designs include ethnography, grounded theory, case studies, narrative research, phenomenology, and others. Qualitative research involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand questions related to *how* and *why* people experience life. This kind of research can be used to gather in-depth insights into a problem or generate new ideas for research. *Research questions* are developed to guide qualitative research projects.

Proposal Content

The thesis must follow content guidelines. The task is to write a proposal dealing with a question or problem that is of interest to the student, of importance to the knowledge of the area, and relevant to the field of nutrition. The proposal will be written in future tense. Approved proposals will contain the following (following the format of the University Thesis and Dissertation Office website: <http://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/submissions/formatting-guide>)

1. Signature page
2. A title page and table of contents;
3. Chapter I: an introduction and statement of the problem, objectives, hypotheses, and/or creative goals;
4. Chapter II: a review of literature;
5. Chapter III: an appropriate methods and analysis;
6. References;
7. Appendices, as appropriate.

Completed Thesis

The thesis must follow content guidelines (according to the format of the University Thesis and Dissertation Office). The final thesis will be written in past tense. Approved completed projects will contain the following:

1. Signature page
2. Abstract;
3. A title page and table of contents;
4. Chapter I: an introduction and statement of the problem, objectives, hypotheses, and/or creative goals;
5. Chapter II: a review of literature;
6. Chapter III: an appropriate methods and analysis;
7. Chapter IV: a results section
8. Chapter IV: a discussion and conclusion section
9. References;
10. Appendices, as appropriate.

Poster Presentation

Graduating graduate students are required to present their findings at a department-wide poster session at the end of the fall or spring semester (depending on which semester they graduate). See page 23 for additional details.

Evaluation

Grading criteria for NUTR 698 are found in the course syllabus.

Directed Project Requirements

Purpose

The purpose of the Directed Project (NUTR 692) experience is to provide MS graduate students with an applied research project alternative to NUTR 698, Thesis. The student will gain hands-on experience in their field of study, while conducting a research-based project.

In consultation with the student's Chair and Committee, the student will create a proposal, conduct appropriate project activities, conduct a validation of the project, provide a final written report, complete an oral defense of the final project to the Committee, and participate in a poster session.

Reasons to Choose NUTR 692

3. Student prefers to conduct an applied research project rather than a theoretical research project (thesis);
4. Student has no plans to get a Ph.D. in the future;
5. Student has an interest in gaining work experience in his/her chosen field of study; and/or
6. Student feels a need to apply topics learned in his/her academic program in the workplace environment.

Appropriate Experiences in NUTR 692

The following list provides examples of appropriate projects that can be undertaken in NUTR 692. This list is not an exhaustive one. The student should consult with his/her Chair and Committee to discuss the experience that is optimally appropriate to fulfill the student's long-term academic and professional goals.

1. Policy Review and Analysis:
Student will work with an organization (government, non-profit, industry) to review and analyze an existing or proposed policy.
2. Policy Writing:
Student will work with a government or advocacy organization that is working on drafting a policy/law/legislation.
3. Mini-Research Project:
Student will conduct a small survey or interview research project with an appropriate entity (government, agency, business) on an appropriate topic that relates to the students interests.
4. Market Analysis:
Student will perform an analysis of an appropriate entity (government, agency, business) of their operation, structure, financial status, or other related topic.
5. Curriculum Development:
Student will identify a need for curriculum development in the field, conduct a thorough review of existing related curriculum (if applicable), and design appropriate curriculum modules and evaluation tools. Pilot testing, or expert review of the curriculum will be conducted.

Proposal Content

Similar to a thesis, the directed project must follow content guidelines. The task is to write a proposal dealing with a question or problem that is of interest to the student, of importance to the knowledge of the area, and relevant to the field of nutrition. Approved proposals will contain the following (following the format of the

University Thesis and Dissertation Office website: <http://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/submissions/formatting-guide>)

1. Signature page
2. A title page and table of contents;
3. Chapter I: an introduction and statement of the problem, objectives, hypotheses, and/or creative goals;
4. Chapter II: a review of literature;
5. Chapter III: an appropriate methods and analysis;
6. References;
7. Appendices, as appropriate.

Completed Project

Similar to a thesis, the directed project must follow content guidelines (according to the format of the University Thesis and Dissertation Office). Approved completed projects will contain the following:

1. Signature page
2. Abstract;
3. A title page and table of contents;
4. Chapter I: an introduction and statement of the problem, objectives, hypotheses, and/or creative goals;
5. Chapter II: a review of literature;
6. Chapter III: an appropriate methods and analysis;
7. Chapter IV: a results section (indicating how literature was used to develop the content and form of the project);
8. Chapter IV: a discussion and conclusion section, including a description of how validation option was utilized to improve the project;
9. References;
10. Appendices, as appropriate.

Directed Project Validation Options

Students completing a directed project will employ one of the following strategies described below to test the project. The validation method will be approved by the committee Chair, and will be employed after the student has received committee approval of the first three chapters and of the project (curriculum, tool, etc.).

1. Pilot implementation and evaluation

Example: For students who develop a curriculum, a lesson (or lessons) would be implemented and evaluated with a test audience that represents the described target audience in the methods. A tool would be created to test:

- the lesson content (including an evaluation of the evidence base),
- delivery, interactivity/learner-centered focus,
- applicability, etc.

Feedback on strengths of the project and areas for improvement would be elicited.

2. Expert review

Expert review panels will be determined by the student and his or her Chair. Review members will be given two weeks to complete the review.

Example: Convene a group of three to five experts to provide feedback on the project. Provide materials in advance for review, and provide an instrument for evaluation regarding content (including evaluation of the evidence base) and design of the project. Lead reviewers in an oral discussion on:

- strengths of the project,
- areas for improvement,
- alignment with needs of intended target audience, etc.

Experts may be outside of the research committee or part of the committee, as approved by the Chair. Consider including:

- content experts,
- experts in instructional design,
- evaluation experts, etc.

The plan for validation should be described in Chapter 3 (methods) of the directed project.

A discussion of findings from either pilot implementation or expert review should be included in Chapter 4 (results) of the directed project. Adjustments made to the project as a result of the validation should be discussed in Chapter 5 (discussion).

Poster Presentation

Graduating graduate students are required to present their findings at a department-wide poster session at the end of the fall or spring semester (depending on which semester they graduate). See page 20 for additional details.

Evaluation

Grading criteria for NUTR 692 are found in the course syllabus.

Process for Enrolling in NUTR 697: Directed Research

The graduate student must complete the following steps before enrolling in NUTR 697:

1. Be advanced to candidacy (see Page 8).
2. Identify an idea or concept for the thesis or directed project.
3. Identify a **Chair** and schedule an appointment to discuss your topic and/or obtain suggestions from your chair. Discuss with your Chair the process for completing a thesis (NUTR 698) or directed project (DP) (NUTR 692) and decide on completing a thesis or directed project (T/DP). (Since students write the first three chapters of their T/DP during NUTR 697, it is important to make this decision prior to enrolling in NUTR 697.) Work with your Chair to identify an additional **two (2) chair-approved members** to be on the thesis/directed project committee. The qualifications of the members are:

Chair- Tenured/tenure-track faculty in the FCS Department

Second Member- CSULB faculty with at least a Master's degree

Third Member- can be from on campus or off campus if s/he has a master's degree or higher

Note: All committee members must have a minimum of three years of work experience after earning the Master's degree.

4. Develop a brief description of thesis/project (using "Research Idea Summary"), and approach potential committee members with this form to invite their participation.
5. Obtain signatures of all committee members on the **Petition for Enrollment in 697: Directed Research** form and submit to FCS Graduate Coordinator.

Process for Completing NUTR 697: Directed Research

1. Student works with Chair to write the thesis/DP proposal, which will include the introduction, review of literature, and methods (Ch. 1–3). Students may consult committee members with questions regarding the research idea and/or methods along the way if needed, but it is customary to work with the Chair to get the proposal (Ch. 1–3) in good shape before sending to other committee members for review.
2. When the proposal (Ch. 1–3) is approved by the Chair, student sends the chapters to the committee for feedback, providing two weeks for review.
3. **Proposal Defense:** At the discretion of the Chair, student schedules a meeting between committee members to discuss the research proposal and elicit feedback from the committee. The meeting should be scheduled a minimum of two weeks after the draft is provided for feedback. At the meeting, the student should be prepared to discuss and defend:
 - a. The research background
 - b. Research questions and/or hypotheses
 - c. Review of literature
 - d. Assumptions and limitations
 - e. Methods
4. Student integrates feedback from committee and provides a revised copy of the proposal (Ch. 1–3) to the committee for review.
5. Student obtains approval for proposal from all committee members by collecting committee signatures on *Thesis/DP Proposal Approval Form*, which is available on the FCS website.
6. Student submits signed *Thesis/DP Proposal Approval Form* to FCS Graduate Coordinator.
7. Student sends request to be permitted into 698 (thesis)/692 (directed project) to FCS Graduate Coordinator. A signed copy of the Thesis/DP Proposal Approval Form must be given to the Graduate Coordinator before the student can register in 698/692.

Note: If NUTR 697 is not completed with a letter grade in the semester in which the student is registered, the student will receive an “RP” (Report in Progress) and continue to work to complete NUTR 697. A letter grade will be assigned once the student has obtained approval of the proposal by all committee members and has submitted the Thesis/DP Proposal Approval Form to the FCS Graduate Coordinator. A letter grade must be assigned for NUTR 697 before the student can register for NUTR 692 or 698.

Topic Changes

If a student desires to change research topics or options (thesis or project) after establishing a chair/committee, the chair and committee must approve the changes. If the changes are not agreeable to all parties, the student may seek another chair/committee.

Process for Completing NUTR 692: Directed Project or NUTR 698: Thesis

1. Student petitions to enroll in NUTR 692 or NUTR 698.
2. If applicable, student submits an application to the Institutional Review Board to obtain approval from the Human Subjects committee as soon as proposal is approved by student's committee (i.e., upon completing the requirements of NUTR 697: Directed Research).
3. Student carries out methods described in Ch. 3 and writes Ch. 4–5 in consultation with the Chair. Note for DP (NUTR 692) students: Student writes the rough draft of project (curriculum, tool, etc.) and carries out the selected validation method (pilot test or expert review).

Note: An alternate manuscript format exists for students who would like to make their thesis or project “publication ready.” The manuscript must follow the guidelines specified by the major field of specialization and Library Thesis and Dissertation Office (see <https://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/submission-process>).

See page 22 for further information.

4. When the thesis/DP is approved by the Chair, the student provides a draft of the thesis to the committee for feedback, providing two weeks for review.
5. Student integrates feedback from committee and provides a revised copy of the thesis/DP (Ch. 1–5) to the committee for review and approval.
6. Student schedules a final defense of the thesis/DP with committee members. The student's presentation should include:
 - a. Title, author and committee members
 - b. Purpose of the study
 - c. Hypotheses tested (if quantitative) OR Guiding research questions (if qualitative)
 - d. Brief review of literature
 - e. Methods
 - f. Findings (including appropriate tables and graphs)
 - g. Implications and practical importance
7. Student obtains signatures of committee chair and committee members on Thesis/DP Approval Form to signify approval of the thesis or directed project.
8. Student participates in FCS Graduate Student Poster Presentations. Contact Graduate Student Assistant by **February 1st** for spring presentation and **October 1st** for fall presentation to schedule poster presentation on a scheduled presentation date. See additional details below.
9. If you would like a pre-consultation with Library Thesis and Dissertation Office, please visit: <https://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/consultations>
10. Student initiates the electronic signature page for using instructions provided by the Library Thesis and Dissertation office. See <https://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/submissions/electronic-signature-pages> for more information. The library will then prompt the student to submit the manuscript electronically.

Refer to the Library website for Thesis/Project Report Submission Deadlines:
http://www.csulb.edu/library/guide/serv/thesis_deadlines.html.

11. The Library Thesis and Dissertation Office will notify the student of changes needed to the thesis/DP manuscript. Make corrections and resubmit until the manuscript is approved. An approval letter will be sent to your thesis/DP Chair, which your chair will provide to the Graduate Coordinator.
12. Student submits to Campus Copy Center for duplications, if desired.

Note: If NUTR 692 or 698 is not completed with a letter grade in the semester in which the student is registered, the student will receive an “RP” (Report in Progress) and continue to work to complete NUTR 692 or 698. RP grades in NUTR 692 or 698 are changed to a letter grade after the thesis project is cleared by the Library Thesis and Dissertation Office.

Writing a Thesis/Directed Project in Manuscript Format

While enrolled in NUTR/GERN 698/2, students may elect to write a manuscript for submission to a journal in lieu of the traditional Chapters 4 and 5 (Results and Discussion). This format has multiple benefits, including improved skills in research writing for publications and potentially improving dissemination of your work to a larger audience (beyond the thesis publication). Students who choose this route should refer to the following guidelines.

Include four chapters in main document, following formatting requirements of the CSULB Thesis and Dissertation Office (TDO):

1. Introduction
2. Review of Literature
3. Methods
4. Results and Discussion

In Chapter 4, include the following statement:

For results and discussion, please refer to Appendix X to find a manuscript based on this (thesis/directed project) prepared for submission to (journal name). This journal was selected (list reasons*).

*Consider the audience/readership of the journal, scope of the journal, similarity of published articles, reputation, etc.

Then place your article in the referenced appendix, following the formatting requirements of the chosen journal. The CSULB TDO does not require appendices to follow a particular format.

For examples of theses/DPs written using manuscript format, please see the following theses (but note that the above instructions were not provided until Spring 2018, so there will be some variation).

Amy Zhong

Product Development Considerations for a Nutrient Rich Bar Using Cricket (*Acheta domestica*) Protein

Keith Roberts

Intakes of Selenium and Calcium are Inversely Correlated with Incidence of Colorectal Cancer: National Health and Nutrition Examination Survey (NHANES) 1999-2014

Francis Dizon

Treatment and Return to Play of Three Runners with Bone Stress Injury and/or Other Traits of a Male-Version of the Female Athlete Triad: A Case Series

Stephanie Detoya

Canned Food Choices of College Students Using the Nuval® Nutrient-Profiling System

Kariann Akiyama

Taste Detection in Post-Laryngectomy Head and Neck Cancer Survivors and Its Effect on Dietary Intake and Malnutrition Status

Poster Presentations

Students are required to complete a poster presentation to share their thesis/directed project with the Graduate Committee, faculty, and an audience of their peers. The presentation seminars are typically held the last Monday of the fall and spring semester between 12-1pm. They are held in Room 108/110 of the Family and Consumer Sciences building or in the FCS courtyard. Students will be contacted by the department Graduate Student Assistant to coordinate the time and date.

The poster presentation allows graduate students to share the findings of their research. It also prepares students for sharing their findings at professional meetings. Students will present the purpose, methods, findings, conclusions, and practical importance of their research. Students must set up the poster prior to 12:00pm.

Students should work with their Chairs to prepare for the poster presentation. The Graduate Coordinator or Graduate Student Assistant will provide the following PowerPoint template that you may use for the poster:

Poster title goes here (use sentence case)

Author's Name/s
Department of XXXXX
College of XXX, California State University Long Beach

Introduction

First...
Introduction...
The page size of this poster template is 50x72" in landscape (horizontal) format. Do not change this page size.
Be sure in mind you do not need to fill up the whole space allocated. Do not make your poster bigger than necessary just to fill that given size.

Aim

How to use this poster template...
Simply highlight this text and replace it by typing in your own text, or copy and paste your text from a MS Word document or a PowerPoint slide presentation.
The subtitle text boxes can be moved up or down depending on how big or small your "Introduction".
"Aim", "Method", "Results" and "Conclusion" are. You can change the sections to suit your specific research project.
The body text / font size should be between 24 and 32 points. Palatino or Times or equivalent. Your main text is easier to read if you use a "bold" font such as Palatino or Times (i.e., people have done experiments and found this to be the case). Use a non-serif font for your title and section headings.
Keep body text left-aligned, do not justify text.
The colour of the text, title and poster background can be changed to the colour of your choice.

TIP: To use an image as a background, go to "Design" >> "Background" >> "Color" >> "Format Background"

Method

Tips for making a successful poster...
• Re-write your paper into poster format if possible. Simplify everything; avoid data overload. Reduce the amount of text to the bare essentials.
• Headings of more than 6 words should be in upper and lower case, not all capitals.
• Never do whole sentences in capitals or underline to stress your point, use bold characters instead.
• When laying out your poster leave breathing space around you text. Don't overcrowd your poster.
• Try using photographs or coloured graphs. Avoid long numerical tables.
• Spell check and get someone else to proof-read.

Results

Importing / inserting files...
Images such as photographs, graphs, diagrams, logos, etc. can be added to the poster.
To insert scanned images into your poster, go through the menu as follows: Insert / Picture / From File... then find the file on your computer, select it, and press OK.
The best type of image files to insert are JPEG or TIFF. JPEG is the preferred format.
Be aware of the image size you are importing. The average colour photo (13 x 18cm at 180dpi) would be about 100k (1Mb for 300 dpi grayscale).
Do not use images from the web.
Notes about graphs...
For simple graphs use MS Excel, or do the graph directly in PowerPoint.
Graphs done in scientific graphing programs (eg. Sigma Plot, Prism, SPSS, Statistica) should be saved as JPEG or TIFF if possible.

Conclusion

You can, of course, start your conclusions in column #3 if your results section is "data light".
Conclusions should not be mere reminders of your results. Instead, you want to guide the reader through what you have concluded from the results. What is the broader significance? "Should anyone be mildly surprised? Why should anyone care?" This section should refer back, explicitly, to the "burning issue" mentioned in the introduction. If you didn't mention a burning issue in the introduction, go back and fix that – your poster should have made a good case for why this experiment was worthwhile.

Acknowledgements

Just highlight this text and replace with your own text. Replace this with your text.

For more information

Please contact emall@csulb.edu. More information on this and related projects can be obtained at www.csulb.edu. (give the URL for general laboratory web site). A link to an online, PDF-version of the poster is also available.

The poster may be printed on campus either through the Geography department (<http://www.cla.csulb.edu/departments/geography/poster-production/>) or that the College of Natural Sciences and Math's Computer Lab (<http://www.csulb.edu/college-of-natural-sciences-and-mathematics/g2-lab/poster-printing>).

Student Checklist for Completion of FCS Master's Degree in Nutritional Science

Advancement to Candidacy

Requirements for advancement to candidacy are:

- Completion of nine (9) graduate level units including NUTR 696.
- A cumulative grade point average (GPA) of 3.0.
- Completion of the Program of Study form with FCS Graduate Coordinator.

Requirements for NUTR 697 Directed Research

- After being advanced to candidacy, complete the *Petition to Enroll in NUTR 697** and submit to FCS Graduate Coordinator.
- Work with thesis/directed project chair on completing proposal (Chapters 1–3).
- Obtain approval for proposal from all committee members by collecting committee signatures on *Thesis/DP Proposal Approval Form**.
- Turn in signed *Thesis/DP Proposal Approval Form* to FCS Graduate Coordinator.

*Forms are available on the FCS website at <https://www.csulb.edu/family-and-consumer-sciences/ms-program-nutritional-science/forms-publications>

Institutional Review Board Approval

- Consult Institutional Review Board (IRB) website (<https://www.csulb.edu/office-of-research-and-sponsored-programs/compliance/institutional-review-board-irb>) to determine if thesis or project requires IRB approval.
- Turn submission packet into IRB.
- Obtain approval from IRB.
- A copy of the IRB letter of approval should be included in the appendices of the thesis/directed project, if applicable.

Requirements for NUTR 692 (Directed Project) or NUTR 698 (Thesis)

- After receiving a grade for NUTR 697, students are eligible to enroll in NUTR 692 or 698. Request a permit from the FCS Graduate Coordinator for enrollment.
- Work with the thesis/directed project chair to conduct research and complete chapters four and five (results and discussion).
- Submit draft to thesis/directed project chair. After thesis/directed project chair has approved a draft, committee members will review and make comments.
- Integrate feedback from committee members, provide a revised copy, and schedule oral defense of thesis/DP with committee members.
- Obtain approval signatures from all committee members on *Thesis/DP Approval Form*.
- Visit the thesis office website at: http://www.csulb.edu/library/guide/serv/thesis_deadlines.html or call (562) 985-4013 to check the submission deadlines for each semester. **THE SUBMISSION DEADLINES VARY EACH SEMESTER.** If you would like a pre-consultation with Library Thesis and Dissertation Office, please visit: <http://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/consultations>

- Initiate an electronic signature page on the library Thesis and Dissertation Office site. Then submit your thesis or directed project to the Library Thesis and Dissertation Office electronically.
- Make changes according to feedback from the Thesis and Dissertation office until the manuscript is approved. An approval letter will be sent to your thesis/directed project chair, which your chair will provide to the Graduate Coordinator.
- Apply for copyright if desired at the Campus Copy Center (562) 985-5050.

File for Graduation

If you want to graduate in SPRING or SUMMER, file your request to graduate between May 1 and October 15. If you want to graduate in FALL or WINTER, file your request to graduate between December 1 and March 1. Late fees apply for missed deadlines. Students must be enrolled in the semester they plan to graduate. Students can enroll in GS 700 if needed.

Poster Presentation

- Contact FCS Graduate Student Assistant by February 1st for spring presentation and October 1st for fall presentation to schedule the poster presentation.
- Complete poster presentation.

- Graduate!**

Important References

California State University Website: www.csulb.edu

FCS Graduate Studies Website: <https://www.csulb.edu/graduate-studies-resource-center> IRB Website:

<https://www.csulb.edu/office-of-research-and-sponsored-programs/institutional-review-board-irb>

Thesis Office: <https://www.csulb.edu/thesis-and-dissertation-office/thesis-and-dissertation-office/consultations>

Thesis/Directed Project Submission Deadlines:

http://www.csulb.edu/library/guide/serv/thesis_deadlines.html