CSU SAN BERNARDINO

MASTER OF SCIENCE IN NUTRITION SCIENCE PROGRAM



STUDENT HANDBOOK 2023-2024

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I. Introduction

Welcome to the Master of Science in Nutrition Science (MSNS) Program at CSUSB!

As an MSNS student, you be exposed to the depth and breadth of the exciting field of nutrition. By the time you are prepared to graduate, you will have gained an expertise in topics of nutrition science and developed and honed highly transferable skills in critical thinking and research methods. This handbook has been developed for you, an MSNS student, to help guide you through your MS program. The handbook covers key information about the program, important Graduate Study details, and checklists, timelines, and other resources to help you be successful in this program.

Key CSUSB Websites

- MSNS Website: <u>Master of Science in Nutrition Science (MSNS)</u> | <u>Department of Health Science</u> <u>& Human Ecology</u> | <u>CSUSB</u>
- Office of Graduate Studies Website: <u>https://www.csusb.edu/graduate-studies</u>
- Office of the Registrar Website: <u>https://www.csusb.edu/registrar</u>

Graduate Program Staff

Department of Health Science & Human Ecology Administrator

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Faculty Contacts

MSNS Program Director (interim)

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HSCI Department Chair

Terezie Tolar-Peterson Physical Science 226 909.537. 5339 Terezie.Tolar-Peterson@csusb.edu

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Program Description

The MS in Nutrition Science prepares students for careers in nutrition and related fields by developing their knowledge and skills in nutrition science, cultural competencies, and applied research methods. As part of the program, students will complete original or applied research, and write and present a thesis or a project. Only students jointly enrolled in the Individualized Supervised-Practice Pathway (ISPP) and the MS program have the option to complete a project that includes supervised-practice experience rather than a thesis. This project-based option requires students to complete the Accreditation Council for Education of Nutrition and Dietetics (ACEND) requirement of 1,000 hours of supervised-practice experience, complete an applied research project in one of the rotation sites, and present their findings.

Learning Outcomes

Institution Learning Outcomes

- 1. *Breadth of Knowledge*. Students identify, explain, and apply multiple approaches to problem solving and knowledge production from within and across disciplines and fields to intellectual, ethical, social, and practical issues.
- 2. **Depth of Knowledge.** Students demonstrate a depth of knowledge in a specific discipline or field and apply the values and ways of knowing and doing specific to that discipline or field to intellectual, ethical, social, and practical issues.
- 3. *Critical Literacies.* Students analyze the ways artistic, oral, quantitative, technological and written expression and information both shape and are shaped by underlying values, assumptions and contexts, so that they can critically contribute to local and global communities.
- 4. *Ways of reasoning and inquiry*. Students engage in diverse methods of reasoning and inquiry to define problems, identify and evaluate potential solutions, and determine a course of action.
- 5. *Creativity and Innovation.* Students develop and use new approaches to thinking, problem solving and expression.
- 6. *Integrative Learning.* Students connect disciplines and learning experiences to frame and solve unscripted problems using lenses from multiple fields, contexts, cultures and identities.
- 7. *Engagement in the Campus, Local and Global Communities.* Students develop dispositions and apply intellect and behaviors to respect and promote social justice and equity on campus and across local and global communities.
- 8. *Diversity and Inclusion*. Students understand how dynamics within global communities influence the ways in which people see the world. They develop dispositions to

respectfully interact and collaborate with diverse individuals and groups and acknowledge their own perspectives and biases.

Program Learning Outcomes

MSNS graduates will:

- **PLO1:** Apply nutrition science knowledge and technical competencies to solve complex problems.
- **PLO2:** Design, analyze, interpret, and critique nutrition research.
- **PLO3:** Effectively communicate and defend evidence-informed ideas and recommendations regarding nutrition science across a diversity of contexts.

Student Learning Outcomes

Graduates of the MSNS will achieve the following during the program.

- **SLO1:** Student will master a breadth of knowledge in nutrition science, including macronutrients, micronutrients, research methods, and cultural competencies.
- **SLO2:** Students will integrate nutrition knowledge and critical thinking skills to solve complex problems in nutritional science in the form of complex case studies.
- **SLO3:** Students will search for and critically read, evaluate, and interpret the scientific literature through group discussions and a written literature review.
- **SLO4:** Students will design, conduct, and present ethically sound research in the field of nutrition and accurately interpret the results and public health implications of the research, through the culminating experience of a thesis or project.
- **SLO5:** Students will effectively and respectfully work collaboratively in groups, and communicate professionally, both in writing and orally, in a variety of settings.
- **SLO6:** Students will use research findings to propose and defend decisions and recommendations for population and individual health and nutrition.

Key Indicators of Program Quality

- 80% or more of students who start the program complete it.
- 80% or more of students concurrently in a DI or ISPP program pass the national RDN exam.
- 75% or more of students secure nutrition-related employment within one year post graduation.
- Graduates of the program will indicate they are satisfied with the MS program in 80% of the items listed on the alumni survey.
- 75% or more of graduates of the program will indicate that the MSNS program prepared them for their first career-related position (based on the alumni survey).
- The MSNS program will have adequate resources allocated to it, as measured by SFR, number of MSNS course offered per year, release time for coordinator and faculty supervision of culminating activities, financial support for students, space and equipment for students and faculty.

Current Status of Program Performance

We are just getting started! Within a couple years of the program, we will report on these key program indicators as program feedback and accountability.

II. Program Organization & Logistics

Organization within the University

Below is an organizational chart with key contacts at the various levels of administration relevant to the MSNS program. As depicted, the MSNS program is in the Department of Health Science and Human Ecology, which is situated in the College of Natural Sciences. The introduction of this handbook also provides important contact information and resources for your reference.



Advisors and Committees

In the MSNS program, there are a couple of different advisors and committees to be aware. This includes your Graduate Advisor, Major Professor, and Thesis or Project Committee.

Graduate Advisor

The Graduate Advisor for all MSNS students is the MSNS Program Director. Your Graduate Advisor should be your first stop for program-related questions, and you should schedule a meeting with this advisor each semester to review your progress. Be proactive in reaching out to and soliciting help from your Graduate Advisor. The role of your Graduate Advisor is to:

- Work with you to develop a course plan to meet your professional goals and interests
- Review your degree progress to ensure you are on track
- Serve as your advocate if there is a conflict with your Major Professor. If your Graduate Advisor and Major Professor are the same person, the Department Chair will assume the role of your advocate in such scenario.

Major Professor

Students are expected to meet with faculty members during the first semester of study to learn about their research and possible thesis/project options for the student to get involved with. Students should then select a Major Professor by the start of the second semester of study (Spring), a decision that is mutual between the Major Professor and student, and is communicated to the MSNS Program Director. Your Major Professor is hugely important to your progress and success in the MSNS program. The role of your Major Professor is to:

- Mentor you through your thesis or project
- Help you select your other Thesis or Project Committee members
- Provide additional input on your course plan, as needed

As you meet with MSNS Faculty Members to learn about their work and select a Major Professor, you may consider discussing the following points:

- What are their areas of expertise and research
- What are their expectations of publishing
- Expectations for research presentations and participation in professional meetings
- Is there a lab group/ group meeting expectation
- Preferred communication and frequency of meetings
- Expectations of time commitment for research
- Expectations of turnaround time for reviewing work and communication with committee
- Philosophy of mentoring

Like your Graduate Advisor, be proactive in meeting with faculty to select a Major Professor, and once selected, be proactive in scheduling regular meetings with your Major Professor.

Thesis Committee or Project Committee

Depending on your track, you will have a Thesis Committee or a Project Committee. Either committee is led by your Major Professor. Once you have selected your Major Professor and research topic, you should work with your Major Professor to identify additional committee members. These committee members do not need to be MSNS Faculty, or even in the Department of Health Science and Human Ecology. It is even possible to include external, non-CSUSB faculty on the committee. A Thesis Committee must include the Major Professor and two (2) additional faculty members. A Project Committee consists of the Major Professor and one (1) additional faculty member, and one of these two people must be the student's ISPP or DI Program Coordinator. The role of the Thesis Committee or Project Committee is to:

- Provide feedback to students on their thesis/project proposal
- Provide feedback to students on their thesis/project work
- Attend the thesis/project presentation
- Evaluate the thesis/project work

MSNS Faculty Members

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III. MSNS Coursework Requirements

Program Prerequisites

There are a number of prerequisites required prior to starting the MSNS program, which are outlined in the table below. The equivalent courses at CSUSB for these prerequisites equate to 26 semester units. In addition to the specific prerequisites, a bachelor degree is required before acceptance into the program.

Prerequisite (CSUSB equivalent)	Units*
	(semester)
General Chemistry series with lab (CHEM 2050 & 2050L)	4
Organic and Biochemistry series with lab (CHEM 2060 & 2060L)	5
Nutritional Biochemistry (HSCI 4661)	3
Anatomy & Physiology with lab (BIOL 2230 & 2240)	8
Statistics (MATH 1201, HSCI 2203 or HSCI 3205)	3
Fundamentals of Human Nutrition (HSCI 3601)	3
Total	26
* The number of units assigned to the prerequisites may differ across	
universities.	

Degree Requirements

The following are requirements for graduation

- 1. A GPA of 3.0 (grade of B) or better in all courses required coursework.
- 2. Completion of 32 units.
- 3. Satisfactory completion of a Thesis or Project.
- 4. Satisfactory completion of an exit seminar corresponding to the Thesis or Project.

Coursework

Courses (Units
Year I - Fail (S	9 units)
HSCI 6601 Macronutrient Biochemistry	3
HSCI 6603 Research Methods & Biostatistics in Nutrition Science	3
Elective	3
Year 1 - Spring (9	9 units)
HSCI 6602 Micronutrient Biochemistry	3
HSCI 6653 Nutrition Assessment	3
Elective	3
Year 2 - Fall (7	(7 units)
HSCI 6973 Thesis or HSCI 6963 Project	3
HSCI 6690 Nutrition Graduate Seminar	1

Elective	3
Year 2 - Spring	(7 units)
HSCI 6973 Thesis or HSCI 6963 Project	3
HSCI 6690 Nutrition Graduate Seminar	1
Elective	3
TOTAL UNITS	32 units

List of approved MSNS electives

- HSCI 6651 Complementary and Alternative Therapy
- HSCI 6652 Nutrition for Sports Performance
- HSCI 6654 Advanced Topics in Nutrition Across the Life Span
- HSCI 6656 Advanced Public Health Nutrition
- HSCI 6657 Management of Nutrition and Dietetic Services
- HSCI 6658 Advanced Topics in Medical Nutrition Therapy
- HSCI 6659 Topics in Global Nutrition
- HSCI 6660 Nutrition in Health & Disease

List of approved electives housed in the MPH program

- HSCI 6220 Advance Topics in Epidemiology
- HSCI 6280 Grant Writing for Health Sciences (prerequisites HSCI 6210 & 6220)
- HSCI 6240 Advanced Study in Health Promotion.
- HSCI 6250 Advanced Topics in Public Health Policy and Administration
- HSCI 6260 Health Education Program Planning and Evaluation
- HSCI 6300 Global Health
- HSCI 6310 Health Education Practice
- HSCI 6340 Information Literacy in Public Health
- HSCI 6360 Qualitative Methods in Public Health
- HSCI 6370 Survey Design in Public Health
- HSCI 6380 Maternal Child Health
- HSCI 6400 Health Science Data Science

Course Availability

The first-year core courses of the MSNS program (e.g., HSCI 6601, 6602, 6603 and 6653) will be offered once per year in accordance with the program roadmap above. The second-year core courses (HSCI 6690, 6963 and 6973) are available during both Fall and Spring semesters.

Electives are offered *at most* once per year and are based on demand and instructor availability. Students should work with their Graduate Advisor to develop a roadmap for their personal plan of study.

DPD Information

The MSNS program at CSUSB does not offer a formal MS-DPD dual track program for graduate students. However, our NSCD undergraduate major offers the accredited DPD coursework, the successful completion of which will result in being issued a verification statement. Therefore, if you have an undergraduate degree in nutrition and would like to complete the DPD at CSUSB as part of your MSNS coursework, this may be possible with careful planning.

To determine the coursework requirements for a DPD verification statement, students should submit official transcripts to both the CSUSB DPD Director and the MSNS Director. The DPD Director will review the student's transcript to assess coursework needs, and the MSNS Director will work with each student on a case-by case basis to determine how to incorporate the DPD course requirements into the MSNS program requirements. Some of the 4000-level DPD courses may count as electives in the MSNS program. This communication should occur before a student starts classes at CSUSB to ensure an effective plan is in place to support the student's goals.

Thesis Track

The thesis will be based on supervised original research conducted by the student with close supervision from the student's major professor. The thesis concept (i.e., the proposed research prior to starting the work) must first be approved by the student's thesis committee, and the final thesis must be reviewed and approved by the students' thesis committee before submitting to Graduate Studies.

The following is an outline of the development and completion of the thesis.

- 1. **Major Professor and committee selection** Within the first semester of the program, the student meets with faculty to learn about their research and finds a faculty member they would like to work with as a major professor. With the major professor, the student selects two additional faculty as the thesis committee (major professor plus two other faculty).
- 2. **Thesis proposal** By the end of the first year, the student should complete a proposal for the thesis work, which must be approved by the student's thesis committee before the student can start the research. This proposal should include an in-depth literature review of the research topic, a problem statement, the hypothesis of the research, the research design, methods that will be used, and APA-formatted references.
- 3. **Register for HSCI 6973 Thesis in order to conduct the thesis research and write the thesis -** In the second year of the program the student will need to register for a total of 6 units of HSCI 6973. During this year, the student will carry out the thesis research and write the thesis. The summer between the first and second year should be used to work on conducting the research and Fall and Spring semesters of the second year should be focused on writing the thesis.
- 4. **Approval of written thesis** The thesis committee must approve a final version of the thesis that will then be submitted to graduate studies.
- 5. Exit seminar Upon completion of the approved thesis, the student should schedule an exit seminar during a time that the thesis committee can attend.

Project Track

The project track is reserved for MSNS students who have been accepted into a DI or ISPP Program to be completed during the second year of their MSNS studies, when the culminating activities take place. The project will be based on the students' DI or ISPP Program training and should focus on a question or problem relevant to applied nutrition or dietetic practice. The project concept (i.e., the project proposal prior to starting the work) must first be approved by the student's project committee, and the final project must be reviewed and approved by the students' project committee before submitting to Graduate Studies.

The following is an outline of the development and completion of the project.

- 1. **Project advisor and committee selection** Within the first semester of the program, the student meets with faculty to learn about their areas of expertise and finds a faculty member they would like to work with as a major professor. In addition to the major professor, the student's ISPP or DI Program Coordinator will serve as a secondary member for the project committee. If the student selects the ISPP or DI Program Coordinator as the project advisor, a second faculty member should be selected to sit on the committee so that the committee is comprised of two people.
- 2. **Project proposal** By the end of the first year, the student should complete a proposal for the project work, which must be approved by the student's project committee before the student can start the work. This proposal should include an in-depth literature review of the topic, a problem statement, the aim of the project, the project and research design, methods that will be used, expected product(s), and APA-formatted references.
- 3. **Register for HSCI 6963 Project in order to conduct the project and write the project report** - In the second year of the program the student will need to register for a total of 6 units of HSCI 6963. During this year, the student will carry out the project and write the project report. The summer between the first and second year should be used to work on developing a plan and timeline for the project activities and reporting writing process, and Fall and Spring semesters of the second year should be focused on carrying out the project and writing the report.
- 4. **Approval of written project report** The project committee must approve a final version of the project report that must also be submitted to the MSNS Program Director.
- 5. **Exit seminar** Upon completion of the approved project report, the student should schedule an exit seminar during a time that the project committee, preceptors and DPD Director can attend.

Advancement to Candidacy

The following requirements must be met for advancement to candidacy to occur:

- 1. Completion of 18 semester units towards the MSNS including the core courses: HSCI 6601, HSCI 6602, HSCI 6603 and HSCI 6653, with a minimum grade point average of 3.0 ("B") and a B (3.0) or higher in all required coursework.
- 2. Thesis or project primary advisor, topic and committee have been approved by the MSNS program director.

3. Submitting a formal program of study of graduate coursework prepared in consultation with the MSNS program director and receiving recommendation for candidacy.

Areas of Specialization

At this time, there are no formal concentrations within the MSNS program. However, a range of electives are offered to allow students to take courses in their area of emphasis. Students should work with their Graduate Advisor to identify available and relevant electives to fulfill the program requirements and their specific interests.

Requirements for graduation

The following criteria must be met before an MSNS student is eligible to graduate:

- 1. Advancement to candidacy for the degree and approval of the specific program of study.
- 2. A GPA of 3.0 (grade of B) or better must be achieved in all courses taken to satisfy the program course requirements.
- 3. Completion of 32 semester units of approved graduate-level coursework included in the formal program.
- 4. The satisfactory completion of a thesis or project, including an exit seminar, is required prior to completion of the program.

Appendix 1. Checklists for MSNS Students

Year 1 Checklist

Review MSNS Timeline (Appendix 2)
Meet with Graduate Advisor to develop your Degree Coursework Plan (Appendix 3)
Complete all Y1 Core Courses: HSCI 6601, 6602, 6603, 6653
Make a plan to meet with the MSNS Faculty (for selecting a Major Professor)
Select a Major Professor and email this to the MSNS Program Director
Complete a concept paper for thesis/project and get approval from Committee
Conduct a thorough literature review on your Thesis/ Project topic
Work on the Thesis/Project proposal over the summer
Meet with Graduate Advisor again to review coursework plan and ensure your enrolled

Appendix 2. MSNS Timeline

Y	EAR 1				
	Month 1 (August)	Month 2 (September)	Month 3 (October)	Month 4 (November)	Month 5 (December)
Fall	 Meet with Graduate Advisor to plan Y1 course schedule Attend mandatory program orientation Read Graduate Handbook 	• Meet with faculty members to learn about their research	• Meet with faculty members to learn about their research	 Meet with Graduate Advisor to confirm spring course schedule Meet with faculty members to learn about their research 	• Meet with faculty members to learn about their research
	Month 6 (January)	Month 7 (February)	Month 8 (March)	Month 9 (April)	Month 10 (May)
Spring		 Have a Major Professor selected and start topic literature review 	•	 Meet with Graduate Advisor to plan Y2 course schedule Complete a concept paper for Thesis/ Project Committee reviews and approves concept paper. 	Conduct thorough literature review on Thesis/ Project
ummer	Month 11 (June) • Develop full proposal for Thesis/Project	 Month 12 (July) Develop full proposal for Thesis/Project 			

YEAR 2							
	Month 1 (August)	Month 2 (September)	Month 3 (October)	Month 4 (November)	Month 5 (December)		
Fall	 Have completed draft of the proposal (including survey tools, codebook, analysis plan, etc.) to your Major Professor by the start of the semester 	 Revise proposal and circulate with committee Finalize proposal with Chair and committee's approval 	 Submit IRB application if needed Collect data 	 Collect data Analyze data 	 Analyze data Writing thesis/project If publishing, select a target journal. 		
	Month 6 (January)	Month 7 (February)	Month 8 (March)	Month 9 (April)	Month 10 (May)		
Spring	Writing thesis/project	 Writing thesis/project Submit full thesis/project draft to chair by the end of the month (allow 2-week review period) 	 Schedule thesis/project presentation Revise thesis/project and circulate with committee (allow 2- week review period) 	 Finalize thesis/project with chair and committee's approval Present thesis/project Final thesis/project submitted (Thesis must be submitted to graduate studies) If publishing, format thesis for journal submission. 	 If publishing, submit manuscript to journal. Congratulations – Graduation! 		

Appendix 3. MSNS Degree Coursework Plan

Name:

Objective:

YEAR 1						
	FALL	SPRING				
Course No.	Course Name	Units	Course No.	Course Name	Units	
HSCI 6602	Micronutrient Biochemistry	3	HSCI 6602	Micronutrient Biochemistry	3	
HSCI 6653	Nutrition Assessment	3	HSCI 6653	Nutrition Assessment	3	
TOTAL			TOTAL			
WINTER			SUMMER			
Course No.	Course Name	Units	Course No.	Course Name	Units	
TOTAL			TOTAL			

YEAR 2					
FALL			SPRING		
Course No.	Course Name	Units	Course No.	Course Name	Units
HSCI 6973/6963	Thesis/ Project	3	HSCI 6973/6963	Thesis/ Project	3
HSCI 6690	Seminar	1	HSCI 6690	Seminar	1
TOTAL			TOTAL		

Appendix 4. Admissions

Meet all university admissions requirements.

- 1. A minimum grade point average of 3.0 ("B") in the last 60 semester units of undergraduate coursework and in all post-graduate coursework.
- 2. Minimum prerequisites for the Master of Science in Nutrition Science include completion of the following college-level courses with a grade of "C" or better: General Chemistry series with lab (CHEM 2050 & 2050L), Organic and biochemistry series with lab (CHEM 2060 & 2060L), Nutritional Biochemistry (e.g., HSCI 4661), Anatomy & Physiology with lab (BIOL 2230 & 2240), Statistics (MATH 1201 or HSCI 3205), Fundamentals of Human Nutrition (HSCI 3601). Exposure to life cycle nutrition as part of another course or as a devoted course is highly recommended (HSCI 3602). Most students with a Bachelor of Science in Nutrition degree will meet the prerequisite requirements.
- 3. A copy of most recent resume or *curriculum vitae*.
- 4. Three letters of recommendations that highlight the applicant's (1) academic ability and potential to succeed in the graduate program and (2) professional experiences that make the candidate ideal for nutrition science.
- 5. A statement of purpose, double-spaced and no more than 1,000 words, detailing: (1) practical experience(s) in nutrition science and how it relates to the program (this is weighted most), (2) academic experience(s) in nutrition or related field, (3) immediate and long-term professional goals and how that relates to the program, (4) reasons for being interested in the Nutrition Science M.S. program at CSUSB, and (5) key skills the applicant can bring to the program.
- 6. Writing sample based on a nutrition topic of interest to the applicant, typed, approximately 1,000 words, double-spaced, with appropriate references (not counted in the word limit). The writing sample should highlight the applicant's basic understanding of human nutrition science and relevant concepts to solve health issues.

Note that students who apply for the dual MS and ISPP will require a DPD verification statement for this track. This will be part of the ISPP admissions review process, which is complementary but independent from the MS admissions process.