

NUTRITION – PH.D.

Program director

Sujatha Rajaram

The Doctor of Philosophy (Ph.D.) degree in nutrition prepares students to effectively conduct nutrition research as well as apply nutritional science knowledge and appropriate research methods to address public health problems. The program provides an advanced curriculum in nutrition, professional skills, and competencies required to support careers in teaching and research. This program is uniquely situated in the School of Public Health at a health sciences university. The program engages in interdisciplinary research, encouraging collaboration across public health disciplines and the basic sciences, promoting and building upon its core legacy of vegetarian and plant-based nutrition. Areas of curricular strength and research emphasis include plant-based diets and the health of the individual, populations and the planet, nutritional epidemiology, diet and chronic disease-risk reduction, and community nutrition.

Students enrolled in this program are able to concurrently complete coursework and practice experience necessary to sit for the registered dietitian nutritionist (RDN) exam if not already an RDN.

Program learning outcomes

By the end of the program, the graduate should be able to:

- Evaluate advanced knowledge in nutritional science and explain the biological mechanism underlying the relationship between nutrients, foods, and diet pattern and health;
- Critically evaluate the evidence base and advocate for the role of plant-based diets in promoting health of the individual, population groups, and the planet;
- Apply analytical and fundamental concepts in nutritional epidemiology;
- Apply principles of research ethics; conduct a research study that addresses a nutrition problem; collect/abstract, analyze, and interpret the data; and report findings;
- Effectively communicate nutritional science, orally and in writing, to the scientific community and the public, advancing the field and promoting public health;
- Use best-practice modalities in pedagogy to deliver educational experiences in an academic setting;
- Apply the principles of scientific and professional ethics in research, teaching, and practice.

Educational effectiveness indicators

- Assessment from required courses
- Comprehensive examination
- Dissertation proposal defense (qualifying examination)
- Dissertation manuscript: submission of two manuscripts from the dissertation to peer-reviewed journals
- One manuscript published in a peer-reviewed journal (from dissertation research or other research)
- Oral defense of dissertation
- Teaching assistantship
- Presentation at a scientific conference

Prerequisites

- Master's degree in nutrition preferred; or an M.S. or M.P.H. degree with completion of all prerequisite courses; or a health professional degree at the master's level or higher (M.D. or equivalent)
- Advanced biochemistry (may be taken concurrently with the program)
- Anatomy and physiology, microbiology, general chemistry, and organic chemistry
- G.P.A. of 3.5 or higher preferred
- GRE or equivalent (above the 40th percentile in each section is favorable)

Individuals who may benefit from the program

Individuals seeking careers in:

- Academia (teaching and research)
- Researcher in private industry, governmental agencies, nonprofit organizations, or research institutes
- Public health nutritionist
- Leadership role in academia and public health sector
- Health practitioners who want to further the evidence base for the role of plant-based diets in the prevention of lifestyle related diseases

Program requirements

Corequisites

NUTR ____	Graduate course in micronutrients or equivalent	
NUTR ____	Graduate course in macronutrients or equivalent	
NUTR 506	Nutritional Metabolism	3
STAT ____	Graduate course in analytical applications in statistics (SPSS or SAS)	
STAT 521 or AHRM 514	Biostatistics I Biostatistics	3-4

Public health core

EPDM 509	Principles of Epidemiology	3
PHCJ 606	Public Health Fundamentals	4
PHCJ 608A	Doctoral Seminar for Public Health	1
PHCJ 608B	Doctoral Seminar for Public Health	1
PHCJ 608C	Doctoral Seminar for Public Health	1
PHCJ 614	Pedagogy: The Art and Science of Teaching	2
PHCJ 615	Intermediate Biostatistics	3
PHCJ 618	Transformative Communication	2

Nutrition core

NUTR 617	Preventive Nutrition I: Carbohydrates and Lipids	2
NUTR 618	Preventive Nutrition II: Protein, Vitamins and Minerals	2
NUTR 619	Preventive Nutrition III: Phytochemicals	3
NUTR 620	Advanced Topics in Nutrition ¹	6
NUTR 664	Vegetarian Nutrition: Person, Population, Planet	3
PHCJ 624A	Scientist Forum ²	1
PHCJ 624B	Scientist Forum ²	1
PHCJ 624C	Scientist Forum ²	1

Religion

RELE 525	Ethics for Scientists	3
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RELR 540	Wholeness and Health ⁷	3
RELT 5__	Graduate-level Theological	3
Electives ³		5
Research core		
NUTR 634	Concepts of Nutritional Epidemiology	3
NUTR 639	Research Methods in Nutrition	2
NUTR 685	Preliminary Research Experience ⁴	2
NUTR 697	Dissertation Proposal ⁶	0-3
NUTR 698	Dissertation ⁶	12
STAT 568	Data Analysis	3
Total Units		72-75

Optional coordinated program in nutrition and dietetics ⁵

DTCS 544	Medical Nutrition Therapy II	5
DTCS 554	Advanced Medical Nutrition Therapy	3
DTCS 566	Food Chemistry and Experimental Foods	4
DTCS 575	Food Systems Management	5
NUTR 490	Topics in Foods and Food Preparation	1
NUTR 525	Nutrition Policy, Programs, and Services	3
NUTR 526	Nutrition Counseling and Education	2
NUTR 527	Assessment of Nutritional Status	3
NUTR 531	Community Nutrition Intervention I	2
NUTR 532	Community Nutrition Intervention II	1
NUTR 534	Maternal and Child Nutrition	3
NUTR 557	Nutrition Care Process for Diabetes and Heart Disease	2
PHCJ 798A	Public Health Practicum	8
or PHCJ 798B	Public Health Practicum	
or PHCJ 798C	Public Health Practicum	
or PHCJ 798D	Public Health Practicum	
DTCS 777	Food Systems Management Affiliation	6
DTCS 778	Clinical Nutrition Affiliation	12
Total Units		60

¹ Register twice for a maximum six units. Each offering in an academic year will be a different topic

² Students are required to register for this course 3 times. 0 units in Autumn and Winter, and 1 unit in Spring.

³ Choose in consultation with academic advisor. Must be graduate-level courses in nutrition, dietetics, public health, or basic sciences.

⁴ Students will take 1 unit at a time.

⁵ All courses are required for eligibility to sit for the RDN examination. Courses completed in a prior program (either at the undergraduate or graduate level) will be evaluated on a course-by-course basis to determine equivalency; thus reducing the number of courses to be completed at LLU. Consult with your advisor if you wish to pursue this option.

⁶ Completed units in NUTR 697 Dissertation Proposal (maximum of 3) will reduce NUTR 698 Dissertation units by the same amount. Minimum combined units for NUTR 697 and NUTR 698 must equal 12.

⁷ Fulfills service learning requirement

Culminating experience

As a part of the culminating experience, the student publishes one manuscript in peer-reviewed journal (co-authorship or review article acceptable, can be from dissertation or non-dissertation related research), submits two publishable papers from their dissertation research to peer reviewed journals, successfully defends dissertation, and submits a committee approved dissertation manuscript. Further details provided in the SPH *Ph.D. Doctoral Handbook*.

Normal time to complete the program

Four (4) years – based on full-time enrollment