

# NUTRITION – PH.D.

## Program director

Sujatha Rajaram

The aim of the Doctor of Philosophy (Ph.D.) degree in nutrition is to prepare students for a career in academia, governmental agencies, research institutes, nonprofit organizations, or private industry. The program is designed to provide an advanced curriculum in nutrition, professional skills, and competencies required to support careers in teaching and research. This program is unique in that we are situated in the School of Public Health in a health science, university. We engage in interdisciplinary research that encourages collaboration across public health disciplines and the basic sciences, and that promotes and builds on our core legacy on 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

## Student learning outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate and evaluate advanced knowledge in nutritional sciences and apply it to the understanding of diet-disease relationships.
- Review and illustrate the biological mechanisms underlying the relationships between nutrients, foods, and diet patterns 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.
- Conduct a nutrition research study including designing the study, collecting and analyzing the data, and interpreting the research findings.
- Effectively communicate nutritional science to diverse stakeholders to advance the field and improve the health of the population.
- Use best practice modalities in pedagogical practices and deliver training or educational experiences that promote learning in academic setting.
- Apply the principles of scientific and professional ethics.

Educational Effectiveness Indicators

## Educational effectiveness indicators

- Comprehensive examination
- Dissertation proposal defense (qualifying examination)
- Dissertation manuscript (2 manuscripts submitted for peer-reviewed publication)
- Oral defense of dissertation
- Teaching assistant
- Presentation at scientific conference

## Prerequisite

- 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.
- GPA of 3.5 or higher preferred
- GRE or equivalent (above the 40<sup>th</sup> 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, research institutes
- Public health nutritionist
- Leadership role in academia and public health sector

## Program requirements

### Corequisites

NUTR 504	Nutritional Metabolism	5
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	4
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	4
STAT 509	General Statistics	4
STAT 548 or STAT 549	Analytical Applications of SAS Analytical Applications of SPSS	2

### Public health core

EPDM 509	Principles of Epidemiology	3
PHCJ 606	Public Health Fundamentals	3
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 608A	Scientist Forum	1
NUTR 608B	Scientist Forum	1
NUTR 608C	Scientist Forum	1
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 <sup>1</sup>	6
NUTR 664	Vegetarian Nutrition: Person, Population, Planet	3

### Religion

RELE 525	Ethics for Scientists	3
REL R 5_	Graduate-level Relational	3
REL T 5_	Graduate-level Theological	3

### Electives <sup>2</sup>

<b>Research core</b>		
NUTR 539	Research Methods in Nutrition	2

NUTR 543	Concepts in Nutritional Epidemiology	3
NUTR 685	Preliminary Research Experience	2
NUTR 698	Dissertation	12
STAT 568	Data Analysis	3
Total Units		72

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

<sup>2</sup> Choose in consultation with academic advisor. Must be graduate-level courses in nutrition, dietetics, public health, or basic sciences.

### **Culminating experience**

As a part of the culminating experience, the student publishes one manuscript in peer-reviewed journal (co-authorship or review article acceptable), 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 Doctoral Handbook.

### **Normal time to complete the program**

4 years based on full-time enrollment