Biochemical and Molecular Nutrition*

Tufts University | Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy

Friedman Core*

Nutrition science	Quantitative reasoning	Policy and programs	Experiential learning
NUTR 370/371: Nutritional Biochemistry and Physiology: Macronutrients/ Micronutrients NUTR 372: Molecular Nutrition: Macronutrients	NUTR 206: Biostatistics 1	NUTR 203 OR NUTR 215 OR NUTR 238 OR NUTR ON 206**	NUTR 236: Practicum in Bioresearch Techniques OR NUTR 397 Directed Study OR Internship, job, or other non classroom experience***
3 courses, **(7.5 CR, FALL/SPR)**	*1 course,* **(3CR, FALL)**	*1 course,* **(3CR, VARIES)**	*1 course,* **(3CR, FALL/VARIES)**

Specialization Requirements

Required courses	Recommended courses	Related courses
NUTR 204: Principles of Epidemiology • **3CR, FALL/SPR** BCHM 223: Graduate Biochemistry • **6CR, FALL** NUTR 240: Nutrition Science Journal Club • **0CR, SPR** NUTR 309: Biostatistics 2 • **3CR, SPR**	NUTR 225: Introduction to Modern Biology Techniques • **1.5CR, FALL****** NUTR ON 243: Nutrition, Brain and Behavior • **1.5CR, FALL** NUTR 248: Precision Nutrition • **3CR, SPR** NUTR 272: Nutrition, Physical Activity and Health • **3CR, SPR** NUTR 319: Intermediate Epidemiology • **3CR, SPR** NUTR ON 316: Advanced Medical Nutrition Therapy • **3CR, SUM**	NUTR 305: Nutritional Epidemiology • **3CR, FALL** NUTR 348: Biomedical Data Science • **1.5CR, SPR** Microbial Communities and the Human Microbiome***** Physiological Mechanisms of Health and Disease***** Statistical Methods for Microbiome Data Analysis*****

Skills and Knowledge Gained

Demonstrate understanding and a working knowledge of macronutrient and micronutrient metabolism, bioavailability, homeostasis, and functions; Knowledge about biostatistical and data analysis methods for biomedical sciences; Practical and experiential methodology for carrying out laboratory experiments in nutrition sciences; Apply appropriate study designs and experimental methods to advance and resolve gaps and controversies in nutrition science; Ability to critically read and evaluate the literature in nutrition sciences; Identify gaps and controversies in the relationships between nutrients and disease prevention or promotion.

Please note: The courses listed here and their availability may be subject to change. Please check SIS for current course offering. *Additional notes on this specialization are available on the following page.*

Biochemical and Molecular Nutrition* (continued)

*This specialization is particularly appropriate for students who want to pursue a PhD. Some courses may require prerequisites beyond the school-wide requirements (e.g., graduate or undergraduate general biochemistry; see full list here); please contact the Dean for Education for more information, or if you would like to request an exemption or substitution from any of the core courses

** NUTR 203: Fundamentals of Nutrition Policy and Programs; NUTR 215: Fundamentals of US Agriculture; NUTR 238: Economics of Food, Agriculture and Nutrition; NUTR ON 206: Global Nutrition Policy and Programs

***Options listed here are *suggested*, not required, provided a minimum of 120 hours of advisor-approved experiential learning has been met

**** NUTR225: Introduction to Modern Biology Techniques is currently offered every other year, with the most recent offering in Fall 2026

***** Indicates a course that offered at Harvard School or Boston University Schools of Public Health

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