

NUTRITION, METABOLISM AND HEALTH

FST/FPE 401

New Course: Spring 2012

DAY: Monday & Wednesday

TIME: 10:00 - 11:15 a.m.

LOCATION: Main Campus, Room TBD

Course Description

Study of the structures, types and metabolism of carbohydrates, lipids and proteins. Discussion of the biological roles of vitamins and minerals. Application and integration of metabolic knowledge with health promotion and chronic disease. (3-0-3)

Benefits

Students will learn about the structures, types and metabolism of carbohydrates, lipids and proteins, and the biological roles of vitamins and minerals. Students will learn to apply and integrate metabolic knowledge to better understand the relationship between diet, health and chronic disease. Students will gain knowledge that can be used personally, while adding to the breadth and depth of their current curricula providing perspective and stimulating actionable approaches in preventive health.

Prerequisites

College-level basic biology, chemistry, biochemistry or physiology class. Students are required to have mastered the fundamental science/chemistry/biology concepts, as well as writing proficiency.

What Will I Learn?

This course will offer students a variety of ways to acquire knowledge and in-depth understanding in several areas, including:

- Biochemical functions of macro- and micronutrients
- Digestion and absorption of nutrients in the human biological system
- Metabolic processes, pathways and utilization of nutrients at the cellular level
- Principles underlying relationships between nutrition and disease
- Use of a computerized nutritional analysis program to critically analyze the nutritional adequacy and composition of your own diet
- How to communicate science in individual and group settings through written and oral modalities

Lectures and assignments will be taught in the context of systems biology to boost the student's ability to integrate and apply knowledge to health and disease prevention.

For additional information, please contact:

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ABOUT THE INSTRUCTOR



Britt Burton-Freeman, Ph.D., is the Director of the Center for Nutrition Research at IIT's Institute for Food Safety and Health (IFSH). She has been involved in obesity and metabolic disease research for more than 15 years, including basic science and clinical research in academic, biotechnology and drug development settings.

Dr. Freeman's current research interests are in mitigating disease process through dietary approaches focused on the health promoting properties of whole foods. Specific disease targets are vascular disease and obesity, including food intake regulation. Through IFSH, she leads a nutrition and health initiative with food industry partners and government collaborators to develop and provide underpinning science for comprehensive innovative approaches for improving the health and quality of life of Americans through diet and lifestyle choices.