

**Nutr 861: Advanced Nutritional Biochemistry: Nutrition and Immunology
Spring 2009**

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This class is designed to provide a basic, fundamental understanding of the immune response and the effect of host nutrition on the immune response. This course will assist students in critically evaluating the literature with respect to claims of the effects of nutrients on immune responses. The first part of the course will consist of lectures to provide the basics of immunology. The second part of the course will consist of student presentations on nutrient-immune interactions. Students will be required to present orally present to the class a general overview of the effect of either a condition (obesity) or a specific nutrient's overall effect on the immune system and then provide a critique of a specific paper relating to the student's topic. In addition to the oral presentation, students will be required to provide a written critique of the paper provided. Grading will consist of class participation and the oral and written presentation. Each student is required to do 2 class presentations and submit 2 written critiques.

The paper should consist of the following: 1) Briefly describe the experiments and results 2) What hypothesis is being tested? 3) Are the controls adequate? 4) Is the study well-designed? 5) Are their alternative explanations for the findings? 6) Is it physiologically relevant? 7) What additional experiments would you suggest based on these results-either to expand the findings or provide a better experimental model.

Jan 14	Introduction to Immune System; Innate Immunity
Jan 21	Antigen Capture and Presentation; Antigen Recognition and Adaptive Immunity
Jan 28	Cell-Mediated Immune Responses; Effector Mechanisms of Cell-Mediated Immunity
Feb 4	Humoral Immune Responses; Effector Mechanisms of Humoral Immune Responses
Feb 11	Immunological Tolerance and Autoimmunity; Immune Responses to Tumors and transplants
Feb 18	Student Presentations: Obesity and the Immune Response
Feb 25	Student Presentations: Dietary Lipids and the Immune Response
Mar 4	Student Presentations: Vitamin E and the Immune Response
Mar 11	SPRING BREAK
Mar 18	Student Presentations: Vitamin D and the Immune response
Mar 25	Student Presentations: Vitamin A, carotenoids and the Immune Response
Apr 1	Student Presentations: Vitamin C and the Immune Response
Apr 8	Student Presentations: Zinc and the Immune Response
Apr 15	Student Presentations: Iron and the Immune Response
Apr 22	FASEB-No classes