

11:709:352:01 Nutrition and Behavior

Fall 2009

Index # 35851

Tuesday 9:15AM–12:15PM

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Office Hours by arrangement

The relationship between nutrition and behavior is bi-directional in nature. There is compelling evidence that overall nutritional status or even the intake of specific nutrients can influence behavior. Conversely, behavior can affect nutritional status through our preference for some foods but our rejection of others. The primary goal of this course is to acquaint you with the diverse literature on nutrition and behavior—familiarizing you with the major questions, areas of controversy, research methods, and relevant theories that pertain to their interaction. A secondary aim is to have you recognize the value of multidisciplinary approaches when evaluating and designing studies that bear on current problems in human nutrition.

Your participation in this class will be expected and count toward your grade. To encourage your active involvement, there are three assignments that involve your thinking about the course material outside the classroom. The first hour or so of each weekly meeting will consist primarily of my lecturing on the topic of the week, although your questions and comments will certainly be encouraged. Following a brief break, the second hour will be reserved for exercises, occasional experiments, discussion of the class assignments, and eventually, your own presentations in a mock debate. Your participation is therefore very critical to the success of the course, and includes your attendance, prompt arrival, and contribution to our weekly meetings, as well as assuming shared responsibility for taking one side of the nutrition–behavior issue that will be debated during a particular week near the end of the semester.

Course requirements include:

1. Class attendance and participation [5%]
2. Breakfast and mood exercise [10%]
3. Motivations to eat exercise [10%]
4. Mid-term examination [25%]
5. Debate assignment [25%]
6. Final examination [25%]

Details regarding the above will be described this morning and in later classes.

Course Text:

Worobey, J., Tepper, B.J., & Kanarek, R. (2006). *Nutrition & behavior: A multidisciplinary approach*. Cambridge, MA: CABI Publishing. [Available at the Douglass/Cook Co-op Bookstore (telephone 732.932.9017)]

Date	Topic/ Reading Assignment
Sep 1	Introduction and overview Chapter 1: Introduction
Sep 8	<i>No class</i> —University follows Monday class schedule
Sep 15	Models and methods in nutrition–behavior research Chapter 2: Concepts and models in nutrition and behavior Chapter 3: Research methods and analytic strategies [Recommended–Appendix: A primer on basic statistics] [<i>Breakfast and mood exercise distributed</i>]
Sep 22	Effects of nutrition on behavior: Part 1 Chapter 4: Effects of nutrition on behavior: Brain → behavior Exercise: Breakfast and mood discussion [<i>Supplementary reading distributed</i>]
Sep 29	Effects of nutrition on behavior: Part 2 Chapter 5: Effects of nutrition on behavior: Neurotransmitters Supplementary reading: O’Brien, C., Mahoney, C., Tharion, W.J., Sils, I.V & Castellani, J.W. (2007). Dietary tyrosine befits cognitive and psychomotor performance during body cooling. <i>Physiology & Behavior</i> , 90, 301-307. [<i>Motivation to eat exercise distributed</i>]
Oct 6	Effects of behavior on nutrition Chapter 10: Bio-behavioral and psychosocial influences on nutrition Exercise: Motivation to eat discussion [<i>Supplementary reading distributed</i>]
Oct 13	Undernutrition and food insufficiency Chapter 6: Effects of chronic and acute forms of undernutrition Supplementary reading: Weiser, S.D., Leiter, K., Bangsberg, D.R., Butler, L.M., Percy-deCorte, F., Hlanze, Z., Phaladze, N., Iacopino, V., & Heisler, M. (2007). Food insufficiency is associated with high-risk sexual behavior among women in Botswana and Swaziland. <i>PLoS Medicine</i> , 4(10), e260. [Debate instructions; review for exam]
Oct 20	Mid-term examination
Oct 27	Minerals and behavioral outcomes Chapter 8: Minerals, the central nervous system and behavior Debate: Should all infant formulas be iron-fortified?

- Nov 3 Vitamins and psychological outcomes
Chapter 7: B vitamins, the central nervous system and behavior
Debate: Do multivitamin-mineral supplements boost mental performance?
- Nov 10 Dietary supplements and mood
Chapter 9: Dietary supplements, mental performance and behavior
Debate: Does *ginkgo biloba* improve memory?
- Nov 17 Stimulants and depressants
Chapter 12: Caffeine, the methylxanthines and behavior
Chapter 13: Alcohol, brain functioning and behavior
Debate: Should energy drinks be allowed to be sold to minors?
- Nov 24 Sugar and nonnutritive sweeteners
Chapter 11: Dietary sugar and behavior
Debate: Does sugar cause hyperactivity?
- Dec 1 Eating disorders
Chapter 14: Eating disorder syndromes: Anorexia and bulimia nervosa
Debate: Does paternal sexual abuse cause eating disorders?
- Dec 8 Factors contributing to excess weight gain
Chapter 15: Behavioral aspects of overweight and obesity
Debate: Do maternal restrictive practices promote child overeating?
- Dec 15 **Final examination** (due by 12 noon at my office, mailbox, or via email attachment)