

SPRING 2008 Syllabus: Dr. Steven Zeisel
Nutrients and Disease: Brain Function and Development
(School of Public Health, McGavran/Greenberg 2213), 9am-10:50am (Mondays)

Class 1: Monday, January 14

The Brain: What is it and how does it develop? - Zeisel

No class Monday, January 21 (Martin Luther King, Jr. Holiday)

Class 2: Monday, January 28

The Brain: An overview of neurophysiology and neurochemistry - Zeisel

Class 3: Monday, February 4

Brain and appetite control – Student

Class 4: Monday, February 11

Iron, copper and brain development and function - Student

Class 5: Monday, February 18

The molecular biology of taste perception – Student

Class 6: Monday, February 25

Folate and brain development and function- Student

Class 7: Monday, March 3

Lipids and brain - Student

No class Monday, March 10 (Spring Break)

No class Monday, March 17

Class 8: Monday, March 24

Zinc and brain - Student

Class 9: Monday, March 31

Retinoic acid, Vitamin D and brain - Student

No class Monday, April 7

Class 10: Monday, April 14

Choline and brain - Student (DR. MIHAI NICULESCU will be faculty leader)

Class 11: Monday, April 21

Presentations of term papers - Students

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Course Description: The course will focus upon the role of nutrition in brain development and function. Also included will be how the brain controls appetite, and the molecular biology of taste perception.

Course Objectives: Upon completion of this course, students will:

1. Have overview knowledge of how the brain works and how it develops.
2. Have detailed knowledge of how specific nutrients alter brain development and function.
3. Have knowledge about appetite regulation
4. Have knowledge about the molecular biology of taste perception.
5. Have experience teaching a seminar-type class.

Course Deliverables: There are **3 types of work required** for the course:

1. Participate in class discussions.
2. Prepare two seminar classes (reading assignments provided by Dr. Zeisel) - assigned week 1 of class
3. Write a paper and present a 15 min powerpoint summary on the last day of class. 5 single spaced pages on the biochemically-oriented topic of your choice related to nutrition and the brain. Do not choose a topic already covered in classes. Ideas for topics include:

Glucose, diabetes and the brain

Exercise, blood flow and the brain

Antioxidants and brain aging

Nitric oxide and brain

Amino acids and serotonin and/or catecholamines in brain

Epigenetics and memory

Grading:

Your grade will be based on performance in the following:

Prepared seminars taught	50%
Class participation	25%
Final paper	25%