

**FSHN 689/PH 689 – Nutritional Epidemiology  
Spring 2013 – Dr. Watters  
Syllabus**

**Class:** Wednesdays **2:30pm - 5:15pm**, Agricultural Science 204

**Course Instructor:** Dr. Corilee Watters, MSc, RD, PhD, CNSC  
Assistant Professor  
University of Hawaii at Manoa  
Human Nutrition, Food and Animal Science  
Rm 314 J, Agriculture Science  
Phone: 808-956-7581  
E-mail: [cwatters@hawaii.edu](mailto:cwatters@hawaii.edu)

**Course TA** David St-Jules, RD  
Doctoral Student  
University of Hawaii at Manoa  
Human Nutrition, Food and Animal Science  
Email: [dstjules@hawaii.edu](mailto:dstjules@hawaii.edu)

**Course Description:** FSHN 689 is a 3-credit course that includes dietary, biochemical, anthropometric and clinical methods used for evaluating nutrition and diet in the etiology and epidemiology of disease.

**Course Prerequisites:** FSHN 685 or equivalent (nutrition), PH 663 or equivalent (epidemiology); or consent of instructor

**Course Text book:** Willett W 2013. Nutritional Epidemiology, 3rd edition, Oxford University Press, required

**Course Objectives:**

1. To develop skill in using epidemiologic concepts and methods to examine nutritional aspects of health and disease in populations.
2. To develop skills in the design and measurement of nutritional parameters in population-based studies of health and disease.
3. To develop skills in evaluating evidence from scientific literature.

## Learning Outcomes

At the conclusion of the course, students should be able to:

1. Critically evaluate methodologies used in nutritional epidemiology
2. Critically evaluate dietary assessment methodologies
3. Describe the current state of epidemiological evidence for relationships of diet to the development of selected diseases.
4. Critically evaluate nutritional epidemiology research publications.
5. Interpret and evaluate epidemiological data in relation to nutrition and health

## Course Requirements and Grading:

### 1. Participation (10% of grade)

Students are expected to attend and actively participate in all classes, unless specifically excused by Dr. Watters. Please listen actively to whoever is speaking and participate in class discussion, by asking or making insightful comments.

### 2. Homework Assignments (15% of grade)

There will be 13 Homework Assignments throughout the term - students are not required to complete the homework on the weeks when they are presenting. Only the top 10 homework assignments will be counted towards the final grade (1.5% each). The homework assignments may be accessed on the FSHN 689/PH 689 Laulima website the week before they are due. All homework assignments must be handed in (hard copy) at the beginning of class – no exceptions.

### 3. Student Session (25% of grade)

Each student will provide a 40-50 minute in-class session on a particular nutritional epidemiology study/dataset - the studies/datasets are outlined in the course schedule below, and include:

NHANES, BRFSS, Honolulu Heart Program, Honolulu-Asia Aging Study, Women's Health Initiative, Nurses' Health Study, Framingham Offspring Study, CRCH

Students are not required to complete the homework assignments on the week that they present. **Material covered by students will be included in the final exam.** Dr. Watters will assign each student to a study in the second week of class. If you have any preferences, please let her know before then.

In the first half of the assigned class session, the student will review the study/dataset using guidelines presented below. In the second half of the assigned class session, the student will lead a critique of a key original nutrition research article from their study/dataset. ***Dr. Watters must approve your study at least 2 weeks prior to your presentation.*** Other students are expected to review the study prior to the presentation and participate in discussion / questions afterwards – studies will be posted on Laulima 1 week prior to the presentation.

Guidelines for the *first half of Student Session (review of study/dataset)*:

- a. Describe the study / dataset (onset, purpose, study type, target population / sampling method, data collection)
- b. Describe the dietary assessment tool (type, administration, validation)

Guidelines for the *second half of Student Session (critical review of study)*:

- a. Describe the problem the study attempts to address
- b. Provide relevant background information to the topic (important definitions)
- c. Briefly describe the study including design, methods, dietary analysis
- d. Summarize the relevant findings
- e. Critique the internal and external validity of the study
- f. Discuss the findings in the context of other research in this area
- g. Identify key gaps in the knowledge / suggest areas for future research

4. *Mid Term Exam (25% of grade)*

5. *Final (cumulative) Exam (25% of grade)*

**Grading System**

85%-100% = A, 75-84% = B, 65-74% = C, 50-64% = D, 49% and lower = F

Class Schedule:

<b>Date</b>	<b>Topic</b>	<b>Readings</b>
Jan 9	<b>Introduction to Nutrition Epidemiology</b> <i>Homework:</i> Novotny et al., 2003	Willett. Ch. 1 Boushey et al., 2006 Bruemmer et al., 2009
Jan 16	<b>Nutrition Monitoring and Surveillance Evaluating Epidemiological Studies</b> <i>Homework:</i> Jackson et al., 2006	WCRF/AICR 2007 - Ch. 3, 12  Willett. Ch. 14 Byers et al., 1997
Jan 23	<b>Introduction to Nutrition Assessment Dietary Reference Intakes</b> <i>Homework:</i> Zatonski et al., 2007	Willett. Ch 4-5, 8 Murphy et al., 2002
Jan 30	<b>Dietary Measurement Issues</b> <i>Homework:</i> Deshmukh-Taskar et al., 2010  <b>3:00-4:00pm Lynne Wilkens, PhD</b>	Willett. Ch 3, 6-7, 12-13
Feb 06	<b>Energy and Physical Activity</b> <i>Homework:</i> Ross et al., 2000 <b>Tonya Lowrey St. John – YRBS</b> <b>3:00-4:00pm Claudio Nigg, PhD</b>	Willett Ch. 10-11
Feb 13	<b>Food Composition / Nutrient Analysis Dietary Supplements</b> <i>Homework:</i> Kolonel et al., 2000 <b>Aflague, Tanisha A</b> <b>3:00-4:00pm Carol Boushey, PhD</b>	<b>Willett. Ch. 2</b> <b>Pennington et al., 2007</b> <b>Katamay et al., 2007</b>
Feb 20	Anthropometrics 2:30 – 3:30 Rachel Novotny, PhD, RD <b>Biomarkers – Fanchon Beckford</b> <i>Homework:</i> McKeown et al., 2004 <b>Gertraud Maskarinec, MD, PhD</b>	Willett. Ch. 9 Foley et al., 2009
Feb 27	<b>Perinatal Nutrition</b> <i>Homework:</i> Deshmukh-Taskar et al., 2009 <b>Monica Esquivel</b> Student Topic – NHANES <b>3:00-4:00 Don Hayes, MD, MPH</b>	Ravelli et al., 1999
Mar 6	<b>Nutrition and Socio-Economic Status</b> <b>Leonora Matanane, Rachel Corrado</b> Student Topic – BRFSS	
Mar 13	<b>Midterm</b>	
Mar 20	<b>Nutrition and Aging</b> <b>Joy Galloway</b> Student Topic – Honolulu:Asia Aging Study 3:00-4:00 Bradley Willcox, MD	
Mar 27	Spring break	

Apr 3	<b>Nutrition and Cardiovascular Disease</b> Student Topic – Honolulu Heart Program 3:00-4:00 Beatriz Rodriguez, PhD <b>Misty Wilcox</b>	
Apr 10	<b>Nutrition Diabetes</b> <b>Treena Delormier, PhD, RD</b> Richard Arakaki, MD <b>Colin Wills</b>	
Apr 17	<b>Nutrition and Osteoporosis</b> <b>Heather Minnick</b> Student Topic – Women’s Health Initiative	
Apr 24	<b>Nutritional Toxicities</b> <b>Daniela Gonzalez Quezada</b> Student Topic – CRCH <b>3:00-4:00 Barbara Brooks, PhD</b>	
May 06	<b>Final Exam</b>	2:15 – 4:15